

# Pakistan Shipowners' Govt. College

C  
Language  
&  
Database

Roll No: 15559  
**Muhammad  
Hasan Khan**  
**2020-21**

XII-Practical of Board of  
Intermediate Education  
Karachi for the year

(دوئم) سال انٹر  
سال تعلیمی  
۲۰۲۰-۲۱



NAME Muhammad Hasan Khan  
FATHER NAME Mohsin Ahmed Khan  
CLASS XII  
GROUP Science General  
ROLL NO 15559  
EMAIL [HasanKhan@yahoo.com](mailto:HasanKhan@yahoo.com)  
CONTACT 02136320000  
COLLEGE Pakistan Shipowners' Govt. Degree College  
SESSION 2020-2021

## **Certificate**

This is to certify that Mr. Muhammad Hasan Khan s/o Mohsin Ahmed Khan, holding Roll No.15559 of XII class, section A, has successfully completed all the requirement of this practical file for the session 2020-21.

---

Course Instructor

Head of the Department

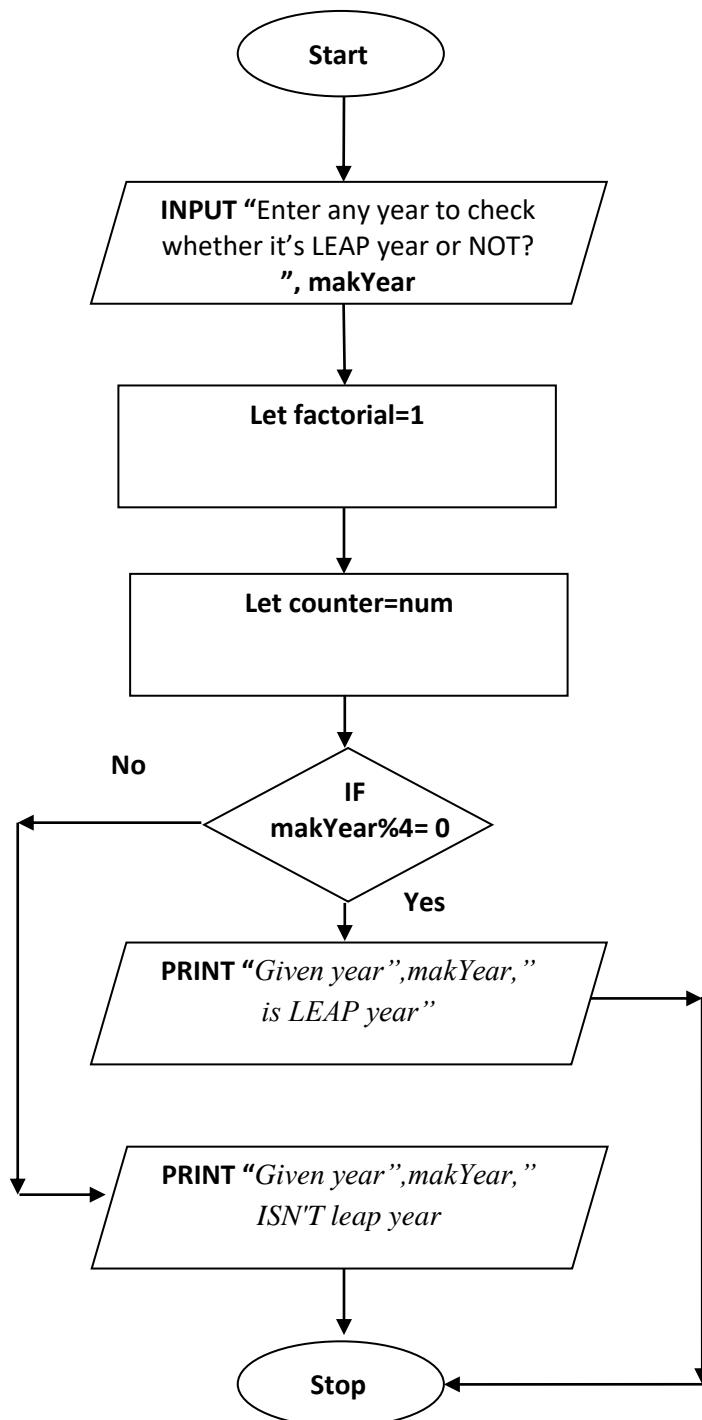
**(Mohsin Ahmed Khan Ghori)**

## TABLE OF CONTENTS

S.No.	Practical	Page No.
	<b><i>Part-1 C-Language Practical</i></b>	<b>5 – 58</b>
1	Leap Year	6 – 8
2	Marks sheet	9 – 12
3	Table of inputted number	13 – 15
4	Factorial of inputted number	16 – 18
5	Inputting three numbers and finds greatest among the three	19 – 22
6	Area and Volume Calculating program	23 – 26
7	Shatranjh (Chess/Check/Draught) Board	27 – 28
8	ASCII codes	30 – 31
9	Print name Ten(10) Times	33 – 36
10	Prime number checking program	37 – 39
11	Escape Sequences	40 – 43
12	Switch case	44 – 46
13	Pattern Printing Program	47 – 49
14	Function for summing two numbers passed as arguments	50 - 53
15	Payroll of Employee	54 – 58
	<b><i>Part-2 Database Practical</i></b>	<b>59 - 91</b>
16	Teacher Database	60 – 63
17	Student Database	64 – 67
18	Students Database	68 – 71
19	MyBank Database	72 – 75
20	Library Database	76 – 79
21	Employees Database	80 – 83
22	BankAccount Database (BankAccount,AccountStatus)	84 – 91

# **Part-1 C-Language**

## Practical No.1 (Flow Chart- Leap Year)



**Practical No.1 (Algorithm- Leap Year)**

Step1: BEGIN

Step2:DECLARE makYear AS integer

Step2: WRITE “Enter any year to check whether it’s LEAP year or  
NOT? ”

Step3: READ, makYear

Step4: IF (makYear%4)=1 THEN

WRITE “Given year „,makYear,“ is LEAP year”

ELSE

WRITE “Given year „,makYear,“ ISN’T leap year”

Step5: READ a character

Step6:END

## Practical No.1 (Coding/Programming)

```
/* ****
Object: Write a program that input a year and then check whether its leap year or Not
****/
```

```
#include <stdio.h>
#include <conio.h>

int makYear; // variable declaration.

void main(void) // main function.

{
    // start of-(sof) body of main function.

    clrscr(); // below code is for showing heading of the output
printf("\n\t\t____");
printf("\n\t\tThis is sample Practical No.01");
printf("\n\t\t~~~~~");

printf("\n\t Enter any year to check whether it's LEAP year or NOT? ");
scanf("%d",&makYear);

if(givenYear%4==0)
{printf("\n\t Given year %d is LEAP year",makYear);}
else
{printf("\n\t Given year %d ISN'T leap year",makYear);}

getch(); // pause screen till any button is pressed.

} // end of-(eof) body of main function.
```

```
***** OUTPUT *****
```

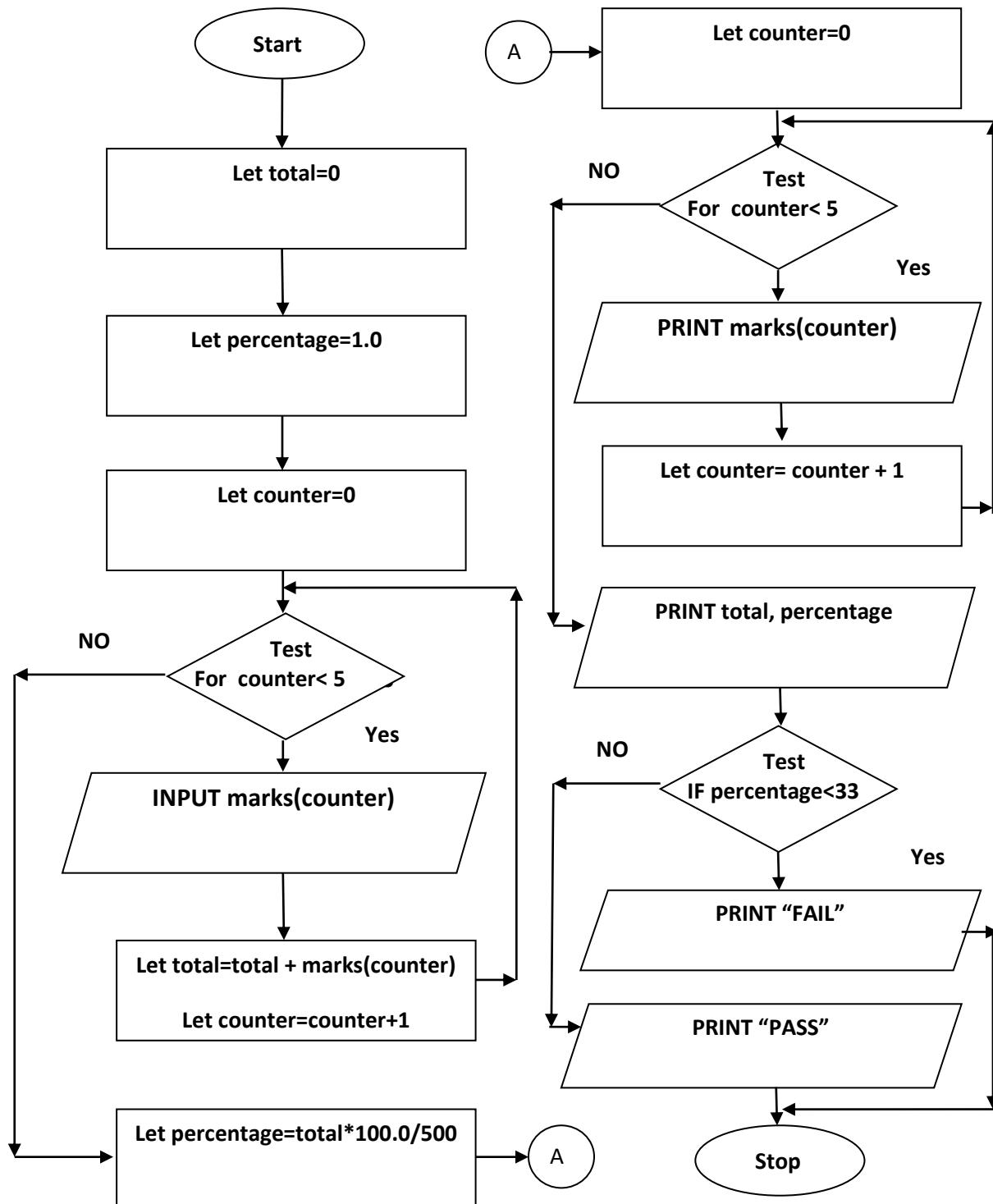
---

```
This is sample Practical No.01;
~~~~~
Enter any year to check whether it's LEAP year or NOT? 1999
```

```
Given year 1999 ISN'T leap year
```

---

Practical No.2 (Flow Chart- Marks sheet)



## Practical No.2 (Algorithm- Marks sheet)

Step1: BEGIN

Step2:DECLARE total,counter AS integer, percentage as real

Step3:DIM marks(5) as integer

Step5: Set total=0, percentage=1.0

Step6: FOR counter=0 to 4 STEP 1

Step7:WRITE “Enter Subject[“,,(counter+1),”] marks? “

Step8: READ marks[counter]

Step9: SET total= total + marks[counter]

Step10: NEXT counter

Step11: SET percentage = total \* 100.0/500

Step12: FOR counter=0 to 4 STEP 1

Step13:WRITE “ Subject[“, (counter+1), ”= “ ,marks[counter]

Step14: NEXT counter

Step15: WRITE “ Total= „,total, „out of 500”

Step16:WRITE “ Percentage= „,percentage

Step17: IF percentage<33 THEN WRITE “FAIL” ELSE WRITE “PASS”

Step18:READ character

Step19:END

## **Practical No.2 (Coding/Programming)**

*/\* \*\*\*PSGC\*\*\*/PRACTICAL02: Write a program that read marks of 5 subjects, calculate the total marks, percentage & state whether candidate is Pass or Fail.\*\*\*\*\*/*

```
#include <stdio.h>
#include <conio.h>

int marks[5],total,counter;
float percentage;
// variable declaration.

void main(void) // main function.

{
    // start of-(sof) body of main function.

    clrscr(); // below code is for showing heading of the output
    printf("\n\tt_____");
    printf("\n\ttThis is sample Practical No.02");
    printf("\n\tt~~~~~");

    total=0;percentage=1.0;

    for(counter=0;counter<5;counter++)
    {
        printf("\n\t Enter Subject [%d] marks? ",counter+1);
        scanf("%d",&marks[counter]);

        total+=marks[counter];
    }

    percentage=total*100.0/500;

    for(counter=0;counter<5;counter++)
    {
        printf("\n\t Subject[%d] marks= %d",counter+1,marks[counter]);
    }
    printf("\n\n\tTotal= %d out of 500",total);
    printf("\n\n\tPercentage= %.2f\n\t",percentage);
```

```
if(percentage<33)
{printf("FAIL");}
else
{printf("PASS");}

getch();           // pause screen till any button is pressed.

}               // end of-(eof) body of main function.

***** OUTPUT *****
```

---

*This is sample Practical No.02*

---

```
Enter Subject [1] marks? 70
Enter Subject [2] marks? 60
Enter Subject [3] marks? 80
Enter Subject [4] marks? 90
Enter Subject [5] marks? 100
```

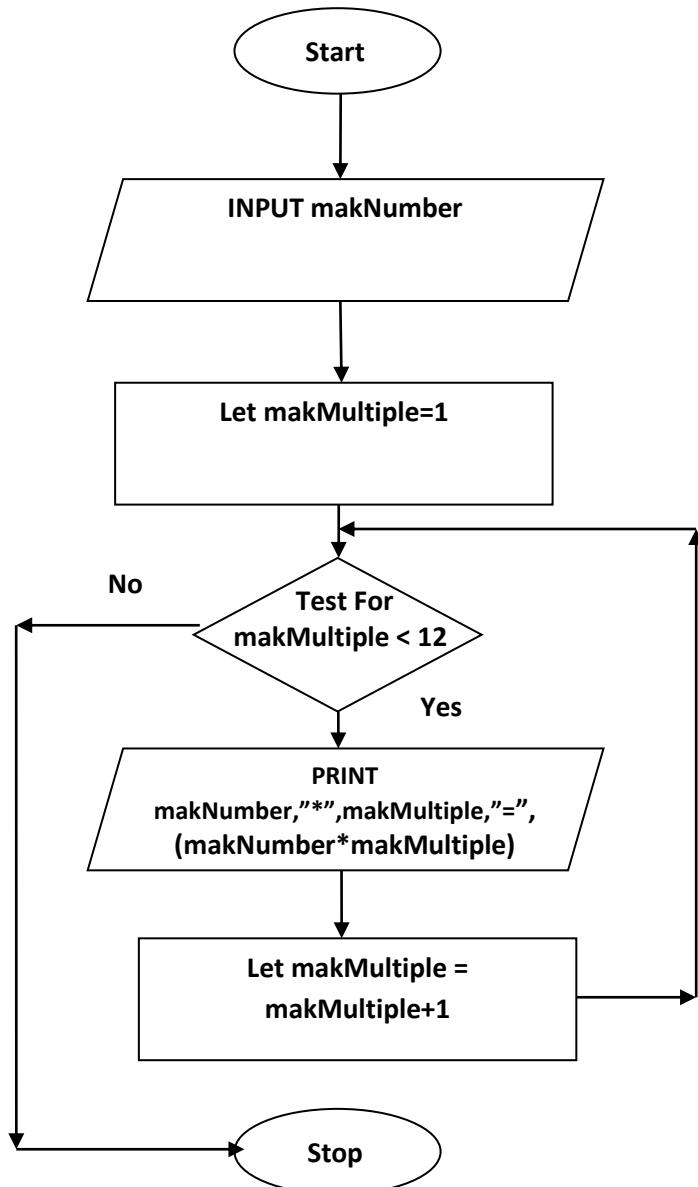
```
Subject[1] marks= 70
Subject[2] marks= 60
Subject[3] marks= 80
Subject[4] marks= 90
Subject[5] marks= 100
```

```
Total= 400 out of 500
Percentage= 80.00
```

*PASS*

```
***** */
```

Practical No.3 (Flow Chart- Table of Inputted No.)



**Practical No.3 (Algorithm- Table of Inputted No.)**

Step1: BEGIN

Step2:DECLARE makNumber,makMultiple as integer

Step3: WRITE "Enter any number to generate it's table? "

Step4: READ makNumber

Step5: FOR makMultiple=1 TO 12 STEP 1

Step6: WRITE

makNumber,"\*",makMultiple,"=", (makNumber\*makMultiple)

Step7: NEXT makMultiple

Step8: READ character

Step9: END

### Practical No.3 (Coding/Programming)

/\* \*\*\*PSGC\*\*\*/PRACTICAL03: Write program to generate the table of any inputted number \*\*\*\*\*/

```
#include <stdio.h>
#include <conio.h>

int makNumber,makMultiple;           // variables declaration.

void main(void)                   // main function.
{
    clrscr();                      // start of-(sof) body of main function.

    // below code is for showing heading of the output
    printf("\n\t\t_____");
    printf("\n\t\tThis is sample Practical No.02");
    printf("\n\t\t~~~~~");
    printf("\n\t\t Enter any number to generate it's table? ");
    scanf("%d",&makNumber);

    // for-loop to generate table till 12.
    for(makMultiple=1;makMultiple<=12;makMultiple++)
    {
        printf("\n\t%d * %d = %d"makNumber,makMultiple,(makNumber*makMultiple));
    }
    getch();                         // pause screen till any button is pressed.

}
// end of-(eof) body of main function.
***** OUTPUT *****
```

---

*This is sample Practical No.03*

---

*Enter any number to generate it's table? 5*

*5 \* 1 = 5*

*5 \* 2 = 10*

*5 \* 3 = 15*

*5 \* 4 = 20*

*5 \* 5 = 25*

*5 \* 6 = 30*

*5 \* 7 = 35*

*5 \* 8 = 40*

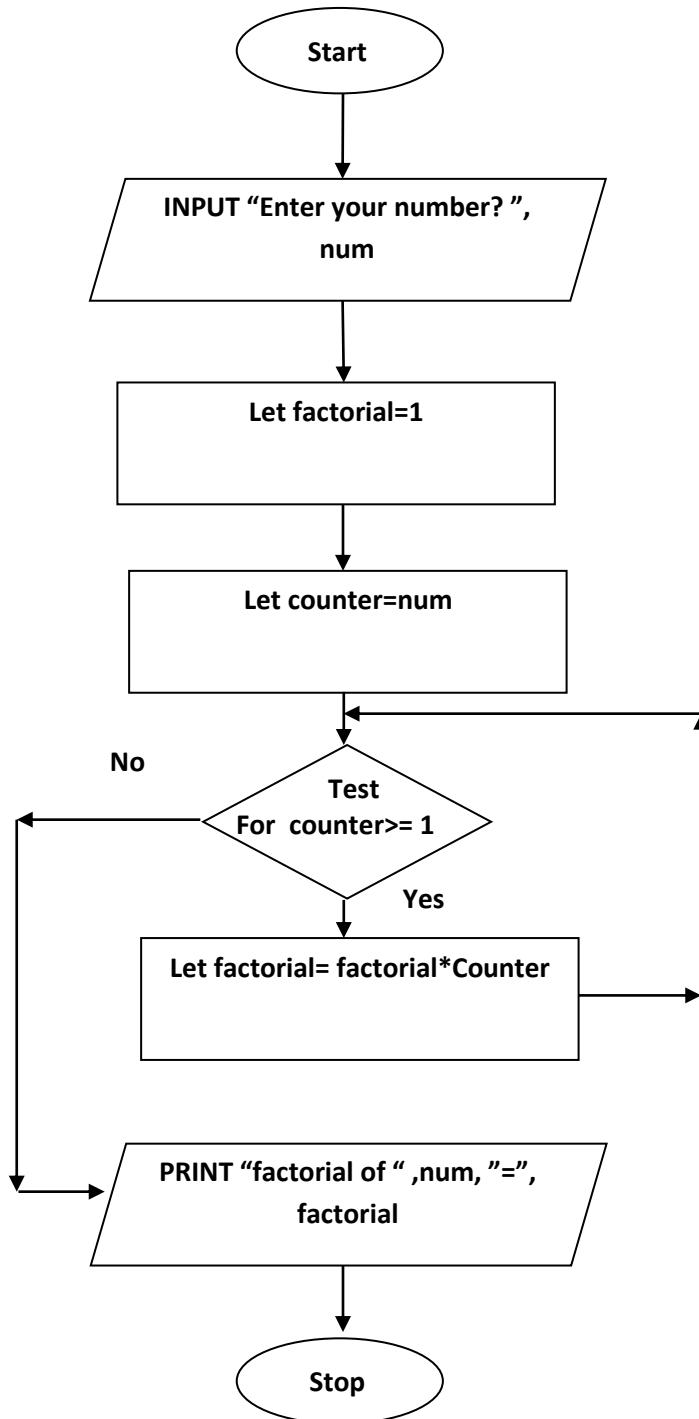
*5 \* 9 = 45*

*5 \* 10 = 50*

*5 \* 11 = 55*

*5 \* 12 = 60*

\*\*\*\*\*

Practical No.4 (Flow Chart-Factorial of inputted No.)

**Practical No.4 (Algorithm- Factorial of inputted No.)**

Step1: BEGIN

Step2:DECLARE counter,factorial,num AS long integer

Step2: WRITE “Enter Number for Factorial? ”

Step3: READ num

Step4: SET factorial=1

Step5: SET counter=factorial

Step7: FOR counter=factorial down to 2 STEP=-1

Step8: SET factorial=factorial\*counter

Step9: NEXT counter

Step10:WRITE “Factorial of”, num, “ = ” ,factorial

Step11:END

### Practical No.4 (Coding/Programming)/\*

\*\*\*PSGC\*\*\*/PRACTICAL04: Write a program that finds the factorial of an inputted number.\*\*\*\*\*/

```
#include <stdio.h>
#include <conio.h>

int inputtedNumber,factorial;

// variable declaration.

void main(void)           // main function.
{
    // start of-(sof) body of main function.
    clrscr();
    // below code is for showing heading of the output
    printf("\n\tt_____");
    printf("\n\ttThis is sample Practical No.04");
    printf("\n\tt~~~~~");

    printf("\n\t Enter number to find it's factorial ? ");
    scanf("%d",&inputtedNumber);

    printf("\n\t Factorial of [%d]",inputtedNumber);
    factorial=1.0;
    for(inputtedNumber=inputtedNumber;inputtedNumber>=1;inputtedNumber--)
    {factorial*=inputtedNumber;}
    printf(" is [%d]",factorial);

    getch();           // pause screen till any button is pressed.
}           // end of-(eof) body of main function.
```

\*\*\*\*\* OUTPUT \*\*\*\*\*

---

This is sample Practical No.04

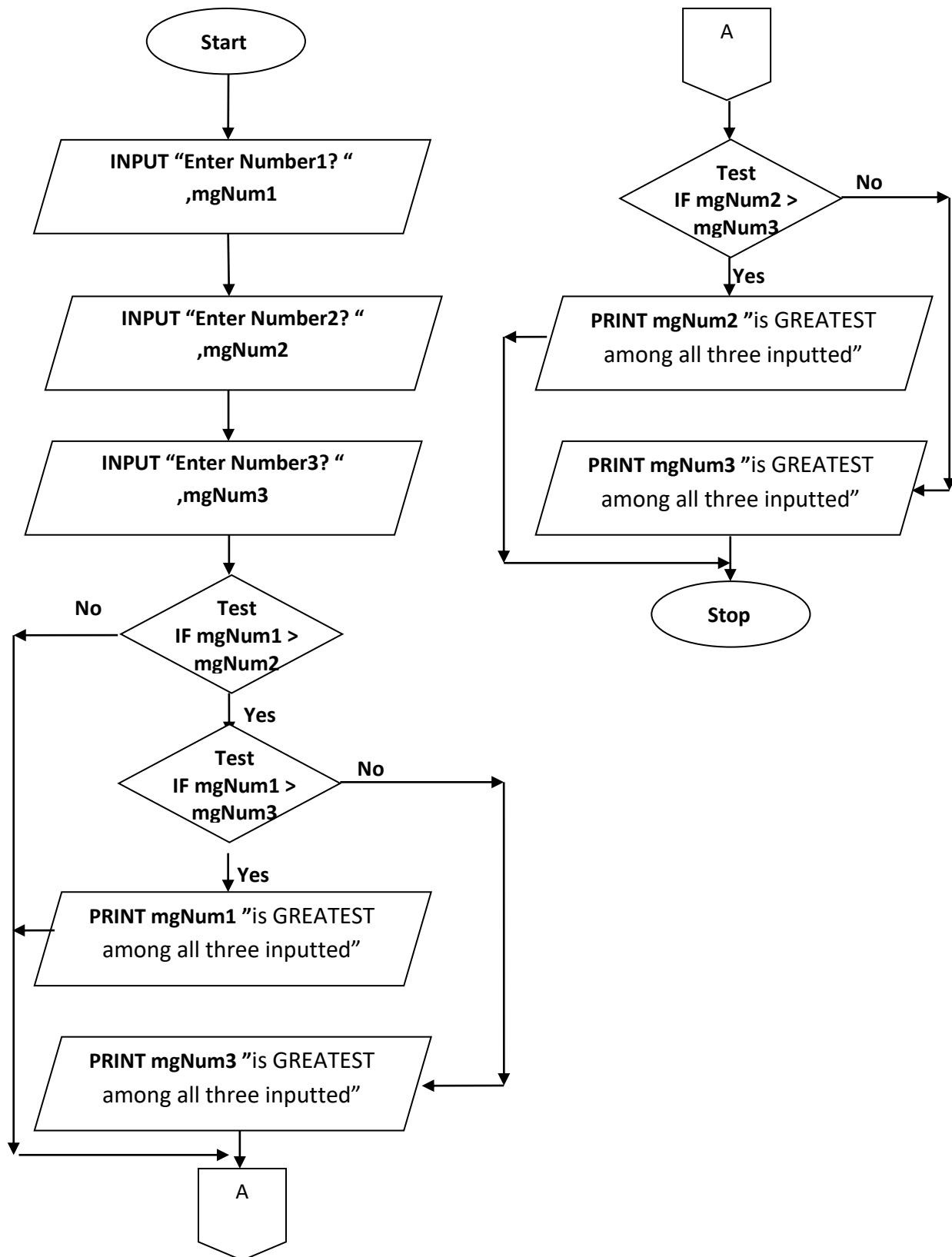
~~~~~

Enter number to find it's factorial ? 6

Factorial of [6] is [720]

\*\*\*\*\*

## Practical No.5 (Flow Chart- Greatest among 3 no.)



### Practical No.5 (Algorithm- Greatest among 3 no.)

Step1: BEGIN  
Step2: DECLARE mgNum1,mgNum2,mgNum3 AS integer  
Step3: WRITE “Enter Number1”  
Step4: READ mgNum1  
Step5: WRITE “Enter Number2”  
Step6: READ mgNum2  
Step7: WRITE “Enter Number3”  
Step8: READ mgNum3  
Step9: IF mgNum1> mgNum2 THEN GOTO Step10 ELSE Step14  
Step10:IF mgNum1> mgNum3 THEN Step8 ELSE Step9  
Step11:WRITE “number1=”,mgNum1,” is GREATEST among all  
three inputted Numbers”  
Step12:WRITE “number3=”,mgNum3,” is GREATEST among all  
three inputted Numbers”  
Step13: ENDIF    rem \*\*\* eof step7 if-structure \*\*\*  
Step14:IF mgNum2>mgNum3 THEN GOTO Step15 ELSE Step16  
Step15: WRITE “number2=”,mgNum2,” is GREATEST among all  
three inputted Numbers”  
Step16:ENDIF    rem \*\*\* eof step15 if-structure \*\*\*  
Step17:ENDIF    rem \*\*\* eof step9 if-structure \*\*\*  
Step18: WRITE “number3=”,mgNum3,” is GREATEST among all  
three inputted Numbers”  
Step19:END

### Practical No.5 (Coding/Programming)

```
/* ***PSGC***/PRACTICAL05:Write a program that finds out the greatest number among  
three inputted numbers.*****/  
#include <stdio.h>  
#include <conio.h>  
int mgNum1,mgNumb2,mgNum3;           // variable declaration.  
void main(void)                      // main function.  
{                                     // start of-(sof) body of main function.  
    clrscr();  
    // below code is for showing heading of the output  
    printf("\n\t\t_____");  
    printf("\n\t\tThis is sample Practical No.05");  
    printf("\n\t\t~~~~~");  
    printf("\n\t\t Enter Number1 ? ");  
    scanf("%d",&mgNum1);  
    printf("\n\t\t Enter Number2 ? ");  
    scanf("%d",&mgNum2);  
    printf("\n\t\t Enter Number3 ? ");  
    scanf("%d",&mgNumb3);  
  
    if(mgNum1>mgNum2)  
    {                                     // body of outer-most if statement.  
        if(mgNum1>mgNumb3)  
        {                                     // body of inner if statement.  
            printf("\n\t\t number1=[%d] is GREATEST among all three inputted Numbers",mgNum1);  
        }  
        else  
        {                                     // else of inner if.  
            printf("\n\t\t number3=[%d] is GREATEST among all three inputted Numbers",mgNum3);  
        }  
    }  
    else if(mgNum2>=mgNum3)  
    {                                     // else-if of outer-most if statement.  
        printf("\n\t\t number2=[%d] is GREATEST among all three inputted Numbers",mgNum2);  
    }  
    else  
    {                                     // else of outer-most if statement.  
        printf("\n\t\t number3=[%d] is GREATEST among all three inputted Numbers",mgNum3);  
    }
```

```
getch();           // pause screen till any button is pressed.  
}                // end of-(eof) body of main function.  
***** OUTPUT *****
```

---

*This is sample Practical No.05*

*Enter number1 ? 6*

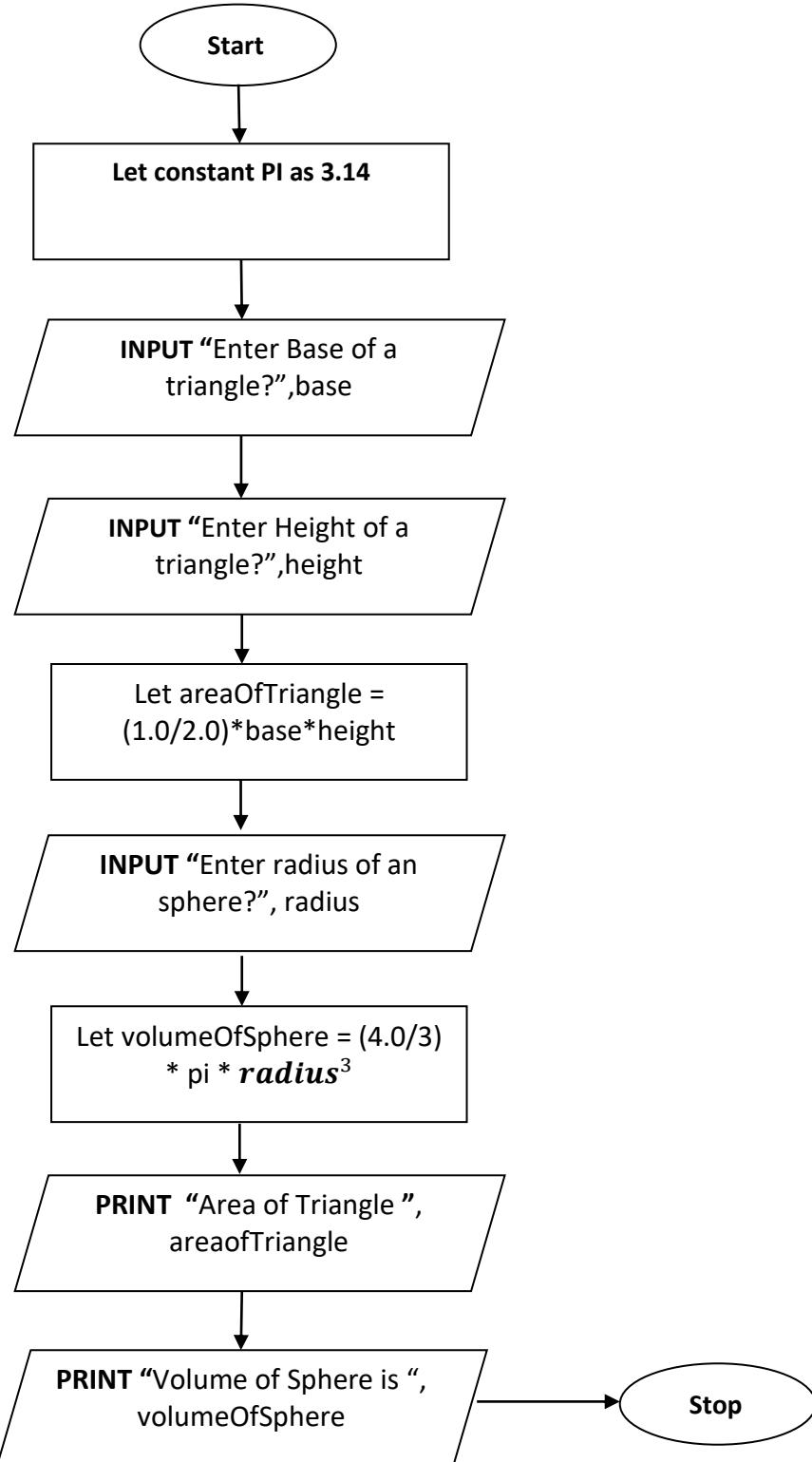
*Enter number2 ? 7*

*Enter number3 ? 5*

*number2=[7] is GREATEST among all three inputted Numbers*

```
*****
```

## Practical No.6 (Flow Chart- Calculating the Area and Volume)



## Practical No.6 (Algorithm- Calculating the Area and Volume)

Step1: BEGIN

Step2: DECLARE pi AS 3.14

Step3: DECLARE areaOfTriangle, volumeOfSphere AS Real Number

Step4: DECLARE radius,base,height AS integer

Step5: WRITE "Enter Base of a triangle? "

Step6: READ base

Step7: WRITE "Enter Height of a triangle? "

Step8: READ height

Step9: SET areaOfTriangle= (1.0/2.0)\*base\*height

Step10: WRITE "Enter radius of an sphere? "

Step11: READ radius

Step12: SET volumeOfSphere= (4.0/3) \* pi \* **radius**<sup>3</sup>

Step13: WRITE " Area of Triangle[base= ]", base, "height= ",  
height, "] is ", areaofTriangle

Step14: WRITE " Volume of Sphere[radius= ", radius ,"] is ",  
volumeOfSphere

Step15: READ character

Step16: END

## **Practical No.6 (Coding/Programming)/\***

\*\*\*PSGC\*\*\*/PRACTICAL06: Write a program which uses arithmetic operators to calculate the area of triangle and volume of sphere.

area of a triangle=(1/2)Base x Height

volume of sphere=(4/3 x pi x radius x radius x radius) \*\*\*\*\*/

```
#include <stdio.h>
#include <conio.h>
#include <math.h>

#define pi 3.14
float areaOfTriangle,volumeOfSphere;      // variable declaration.
int radius,base,height;
void main(void)                          // main function.
{                                      // start of-(sof) body of main function.
clrscr();                                // below code is for showing heading of the output
printf("\n\t\t_____");
printf("\n\t\tThis is sample Practical No.06");
printf("\n\t\t~~~~~");

printf("\n\t Enter Base of a triangle? ");
scanf("%d",&base);

printf("\n\t Enter Height of a triangle? ");
scanf("%d",&height);

areaOfTriangle=(1.0/2.0*base*height);

printf("\n\t Enter radius of an sphere? ");
scanf("%d",&radius);

volumeOfSphere= 4.0/3*pi*pow(radius,3);

printf("\n\t Area of Triangle[base=%d height=%d] is %.2f",base,height,areaOfTriangle);
printf("\n\t Volume of Sphere[radius=%d] is %.2f",radius,volumeOfSphere);

getch();                                // pause screen till any button is pressed.
```

```
}
```

// end of-(eof) body of main function.

```
***** OUTPUT *****
```

---

*This is sample Practical No.06*

---

*Enter Breath of a triangle? 4*

*Enter Height of a triangle? 6*

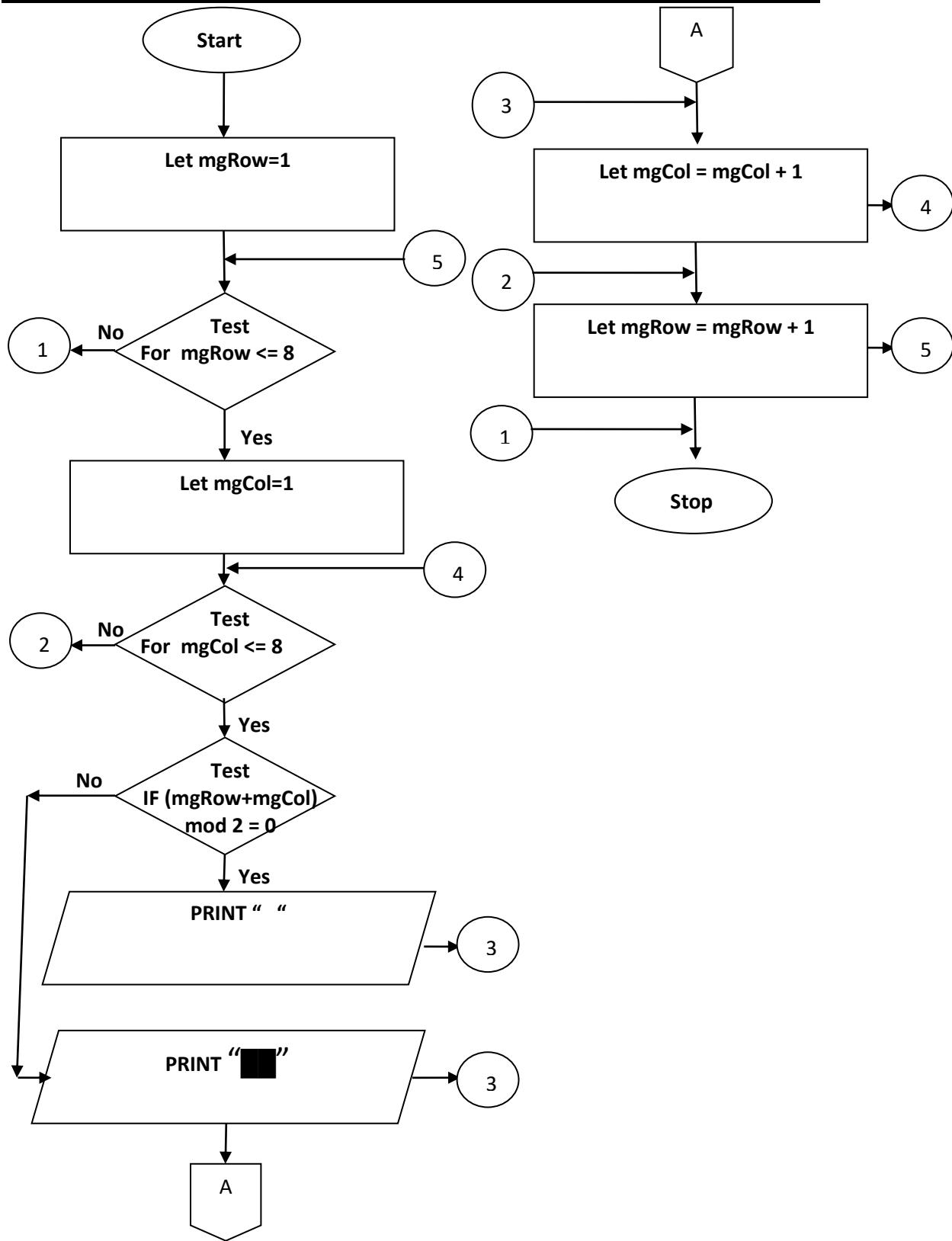
*Enter radius of an sphere? 3*

*Area of Triangle[base=6 height=4] is 12.00*

*Volume of Sphere[radius=3] is 113.04*

```
*****/
```

## Practical No.7 (Flow Chart- Shatranj Board)



**Practical No.7 (Algorithm-- Shatranjh Board)**

Step1: BEGIN  
Step2: DECLARE mgRow,mgColumn AS integer  
Step3: FOR mgRow=1 to 8 Step=1  
Step4: WRITELINE  
Step5: FOR mgColumn=1 to 8 Step=1  
Step6: IF (mgRow+mgColumn) Mod 2= 0 THEN WRITE “ ” ELSE  
        WRITE “■”  
Step7: NEXT mgColumn  
Step8: NEXT mgRow  
Step9: READ character  
Step10: END

## Practical No.7 (Coding/Programming)

/\* \*\*\*PSGC\*\*\*/PRACTICAL07: write a program to draw a check-board using if-else statement and Nested for loops. \*\*\*\*\*/

```
#include <stdio.h>
#include <conio.h>
int mgRow,mgColumn;           // variable declaration.

void main(void)              // main function.
{
    // start of-(sof) body of main function.
    clrscr();                  // below code is for showing heading of the output
    printf("\n\t\t_____");
    printf("\n\t\tThis is sample Practical No.07");
    printf("\n\t\t~~~~~");
    printf("\n\n");             // printf two line gap on screen.
    for(mgRow=1;mgRow<=8;mgRow++)
    {
        printf("\n");          // printing line gap on screen.
        for(mgColumn=1;mgColumn<=8;mgColumn++)
        {

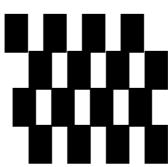
            if((mgRow+mgColumn)%2==0)
                printf(" ");
            else
                printf("■"); // Ascii code of ■ is 219 can also be used.
        }                   // end offor columnCounter loop.

    }                     // end offor rowCounter loop.
    getch();               // pause screen till any button is pressed.
}                     // end of-(eof) body of main function.
***** OUTPUT *****
```

---

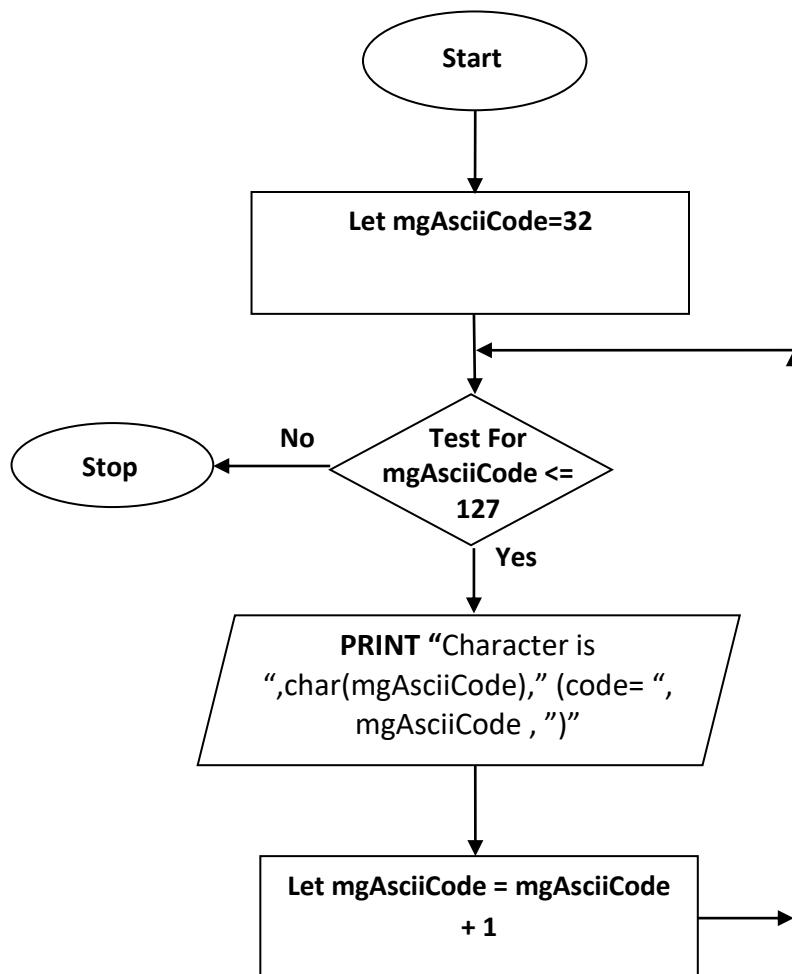
This is sample Practical No.07

---




---

\*\*\*\*\*

Practical No.8 (Flow Chart- ASCII Code)

**Practical No.8 (Algorithm- ASCII Code)**

Step1: BEGIN

Step2: DECLARE mgAsciiCode AS integer

Step3: FOR mgAsciiCode=32 to 127 Step=1

Step4: WRITE “Character is „,char(mgAsciiCode),” (code= „,  
mgAsciiCode , ”)”

Step5: READ character

Step6: END

### Practical No.8 (Coding/Programming)

/\* \*\*\*PSGC\*\*\*/PRACTICAL08: Write a program that generate characters corresponding to ASCII codes from 32 to 127 (using any loop). \*\*\*\*\*/

```
#include <stdio.h>
#include <conio.h>

int mgAsciiCode; // variable declaration.

void main(void) // main function.
{
    // start of-(sof) body of main function.
    clrscr(); // below code is for showing heading of the output
    printf("\n\t\t____");
    printf("\n\t\tThis is sample Practical No.08");
    printf("\n\t\t~~~~~");
    for(mgAsciiCode=32;mgAsciiCode<=127;mgAsciiCode++)
    {
        printf("\tCharacter is %c(code=%d)",mgAsciiCode,mgAsciiCode);
    } // end offor loop.

    getch(); // pause screen till any button is pressed.
} // end of-(eof) body of main function.
```

\*\*\*\*\* OUTPUT \*\*\*\*\*

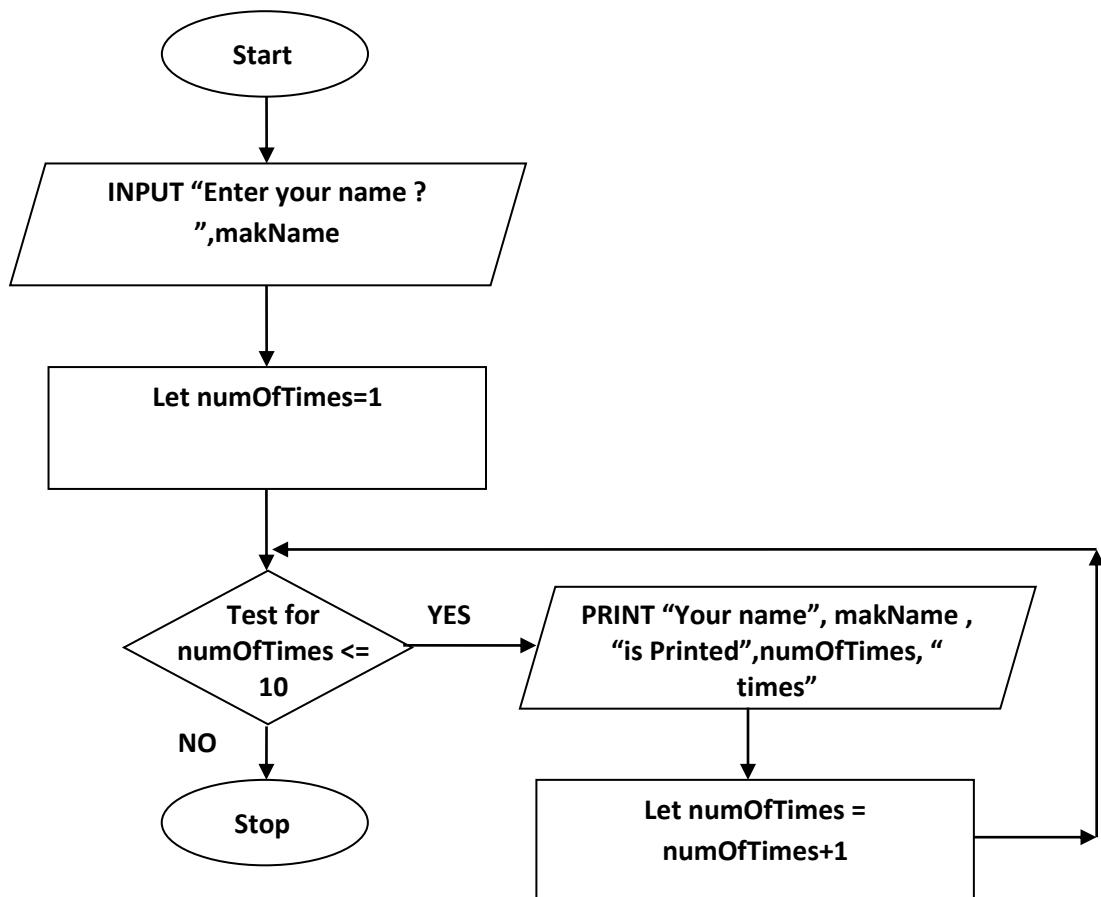
---

*This is sample Practical No.08*

*~~~~~*

*Character is (code=32) Character is !(Code=330 . .Character is A(code=65)  
Character is B(code=66)..... Character is • (code=127)*

\*\*\*\*\*

Practical No.9 (Flow Chart- Printing name 10 times)

**Practcial No.9 (Algorithm- Print name 10 times)**

Step1: BEGIN

Step2: DECLARE Dim makName(20) AS character, numOfTimes  
as integer

Step3: WRITE “Enter your name ? ”

Step4: READ makName

Step5: FOR numOfTimes=1 to 10 Step=1

Step6: WRITE “Your Name”, makName , “ is printed”,  
numOfTimes, “ times

Step7: READ character

Step8: END

## **Practical No.9 (Coding/Programming)**

*/\* \*\*\*PSGC\*\*\*/PRACTICAL09: Write a program that reads your name and prints that name 10 times using scanf() and printf() statements) \*\*\*\*\*/*

```
#include <stdio.h>
#include <conio.h>

char name[20];           // variable declaration.
int numOfType;

void main(void)          // main function.
{
    // start of-(sof) body of main function.
    clrscr();
    // below code is for showing heading of the output
    printf("\n\t\t_____");
    printf("\n\t\tThis is sample Practical No.09");
    printf("\n\t\t~~~~~");

    printf("\n\t Enter your name ? ");
    scanf("%s"makName);
    for(numOfType=1;numOfType<=10;numOfType++)
    {
        printf("\n\t Your Name %s is printed %d times " ,makName, numOfType);
    }
    getch();           // pause screen till any button is pressed.
}                      // end of-(eof) body of main function.
```

\*\*\*\*\* OUTPUT \*\*\*\*\*

---

*This is sample Practical No.09*

---

*Enter Student name? Hasan*

*Enter Student age? 3*

*Enter height (5.4/6.0 etc)? 3.25*

*Enter Student gender(male/female)? male*

*Name of Student is Hasan*

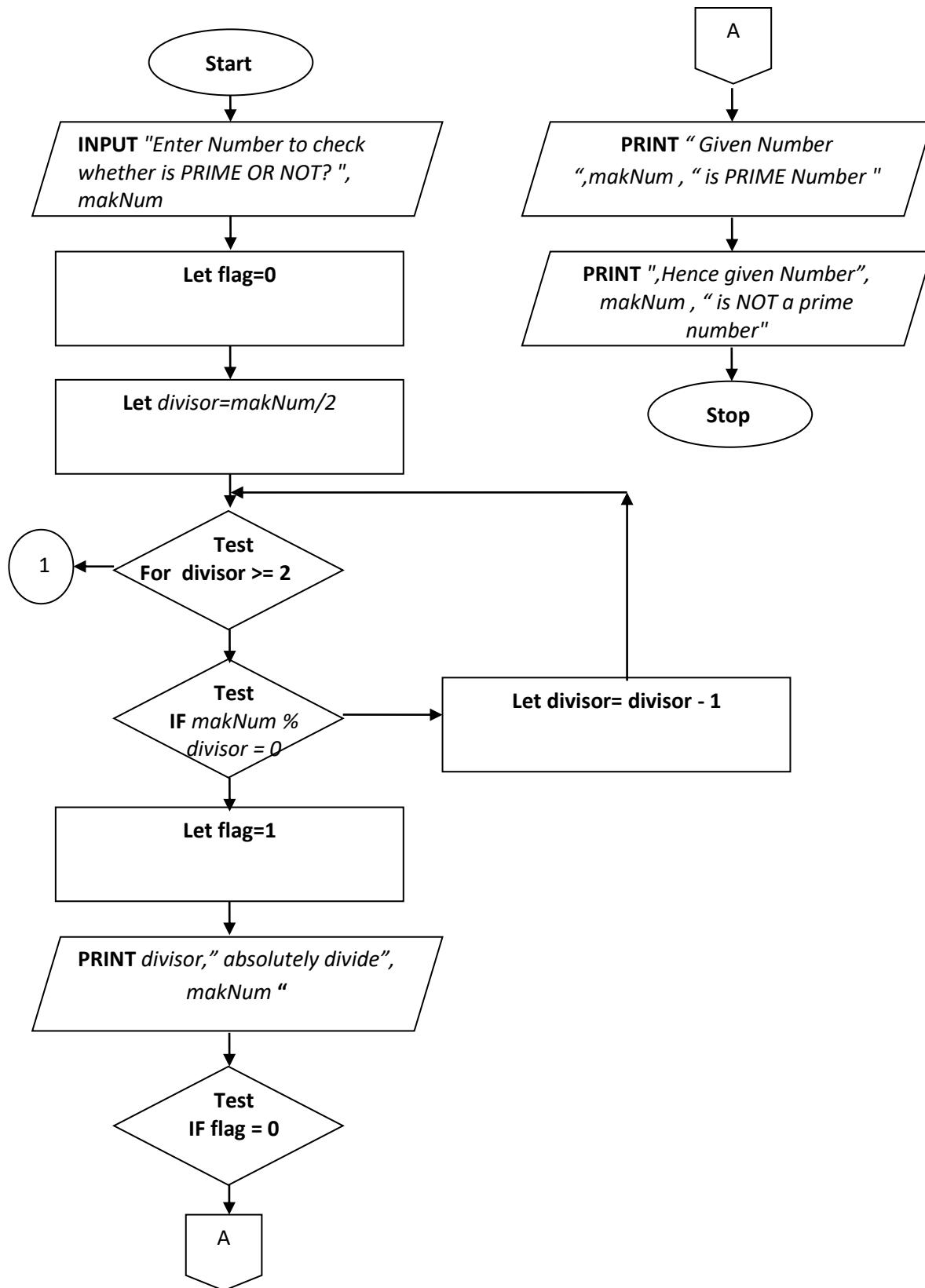
*Age of Student is 3*

*Height of Student is 3.25*

*Gender of Student is male*

\*\*\*\*\*\*/

## Practical No.10 (Flow Chart- Prime No. checking)



## Practical No.10 (Algorithm- Prime No. checking)

Step1: BEGIN  
Step2: DECLARE makNum,flag, divisor as integer  
Step3: WRITE " Enter Number to check whether is PRIME OR  
NOT? "  
Step4: READ makNum  
Step5: flag=0  
Step6: FOR divisor=makNum/2 to 2 STEP= -1  
Step7: IF (makNum MOD divisor)= 0 THEN  
Step8: SET flag=1  
Step9: WRITE divisor," absolutely divide", makNum  
Step10: GOTO Step 13  
Step11: END IF  
Step12: NEXT divisor  
Step13: IF flag=0 THEN WRITE " Given Number ",makNum , " is  
PRIME Number " ELSE WRITE ",Hence given Number",  
makNum , " is NOT a prime number"  
Step14: ENDIF  
Step15: END

### Practical No.10 (Coding/Programming)

/\* \*\*\*PSGC\*\*\*/PRACTICAL10: Write a program that input a number and then check it whether it is prime or not . \*\*\*\*\*/

```
#include <stdio.h>
#include <conio.h>

int number, divisor, flag; // variable declaration.

void main(void) // main function.
{
    // start of-(sof) body of main function.
    clrscr(); // below code is for showing heading of the output
    printf("\n\t\t_____");
    printf("\n\t\tThis is sample Practical No.10");
    printf("\n\t\t~~~~~");

    printf("\n\t Enter Number to check whether is PRIME OR NOT? ");
    scanf("%d", &number);
    flag=0;

    for(divisor=number/2; divisor>=2; divisor--)
    {
        if(number%divisor==0) {flag=1; printf("%d absolutely divide %d", divisor, number); break;}
    }

    if(flag==0) printf("\n\t Given Number %d is PRIME number", number);
    else
        printf(", Hence given Number %d is NOT a prime number", number);

    getch(); // pause screen till any button is pressed.
} // end of-(eof) body of main function.
```

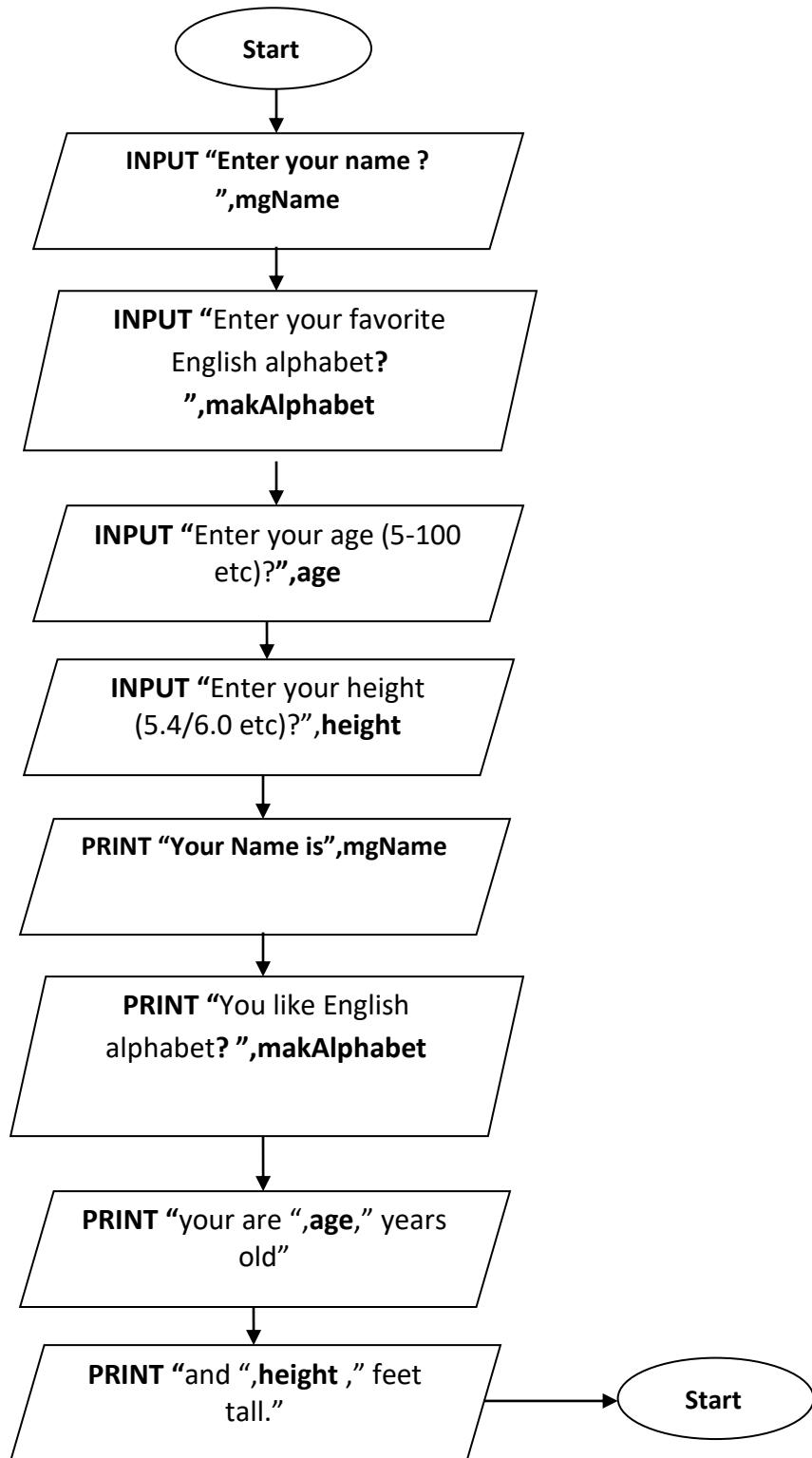
\*\*\*\*\* OUTPUT \*\*\*\*\*

---

This is sample Practical No.10  
~~~~~  
Enter Number to check wheter its PRIME OR NOT? 7  
Given Number 7 is PRIME number

\*\*\*\*\*

## Practical No.11 (Flow Chart)



### **Practical No.11 (Algorithm)**

Step1: BEGIN

Step2: DECLARE mgName AS String, makAlphabet AS Character,  
age AS integer, height AS Real number

Step3: WRITE "Enter your name? "

Step4: READ mgName

Step5: WRITE "Enter your favorite English alphabet?"

Step6: READ makAlphabet

Step7: WRITE "Enter your age (5-100 etc)? "

Step8: READ age

Step9: WRITE "Enter your height (5.4/6.0 etc)? "

Step10: READ height

Step11: WRITE "Your Name is ",mgName

Step12: WRITE "you like English alphabet ",makAlphabet

Step13: WRITE "you are ",age, " years old"

Step14: WRITE " and ",height, " feet tall."

Step15: END

## **Practical No.11 (Coding/Programming)**

*/\* \*\*\*PSGC\*\*\*/PRACTICAL11:Write a program which print a text of four lines consisting of characters, integers value and floating point value using printf() statement and escape sequences. . \*\*\*\*\*/*

```
#include <stdio.h>
#include <conio.h>

char mgName[30],makAlphabet;      // variable declaration.
unsigned int age;
float height;

void main(void)                  // main function.
{
    // start of-(sof) body of main function.
    clrscr();                     // below code is for showing heading of the output
    printf("\n\t\t_____");
    printf("\n\t\tThis is sample Practical No.11");
    printf("\n\t\t~~~~~");

    printf("\n\t Enter your name? ");
    gets(mgName);
    printf("\n\t Enter your favorite English alphabet? ");
    makAlphabet=getchar();
    printf("\n\t Enter your age (5-100 etc)? ");
    scanf("%u",&age);
    printf("\n\t Enter your height (5.4/6.0 etc)? ");
    scanf("%f",&height);

    printf("\n\t Your Name is %s,",mgName);
    printf("\n\t you like English alphabet %c,",makAlphabet);
    printf("\n\t you are %u years old,",age);
    printf("\n\t and %.2f feet tall.",height);

    getch();           // pause screen till any button is pressed.
}                      // end of-(eof) body of main function.
```

\*\*\*\*\* OUTPUT \*\*\*\*\*

*This is sample Practical No.11*

~~~~~

*Enter your name? Muhammad Hasan Khan Ghori*

*Enter your favorite English alphabet? M*

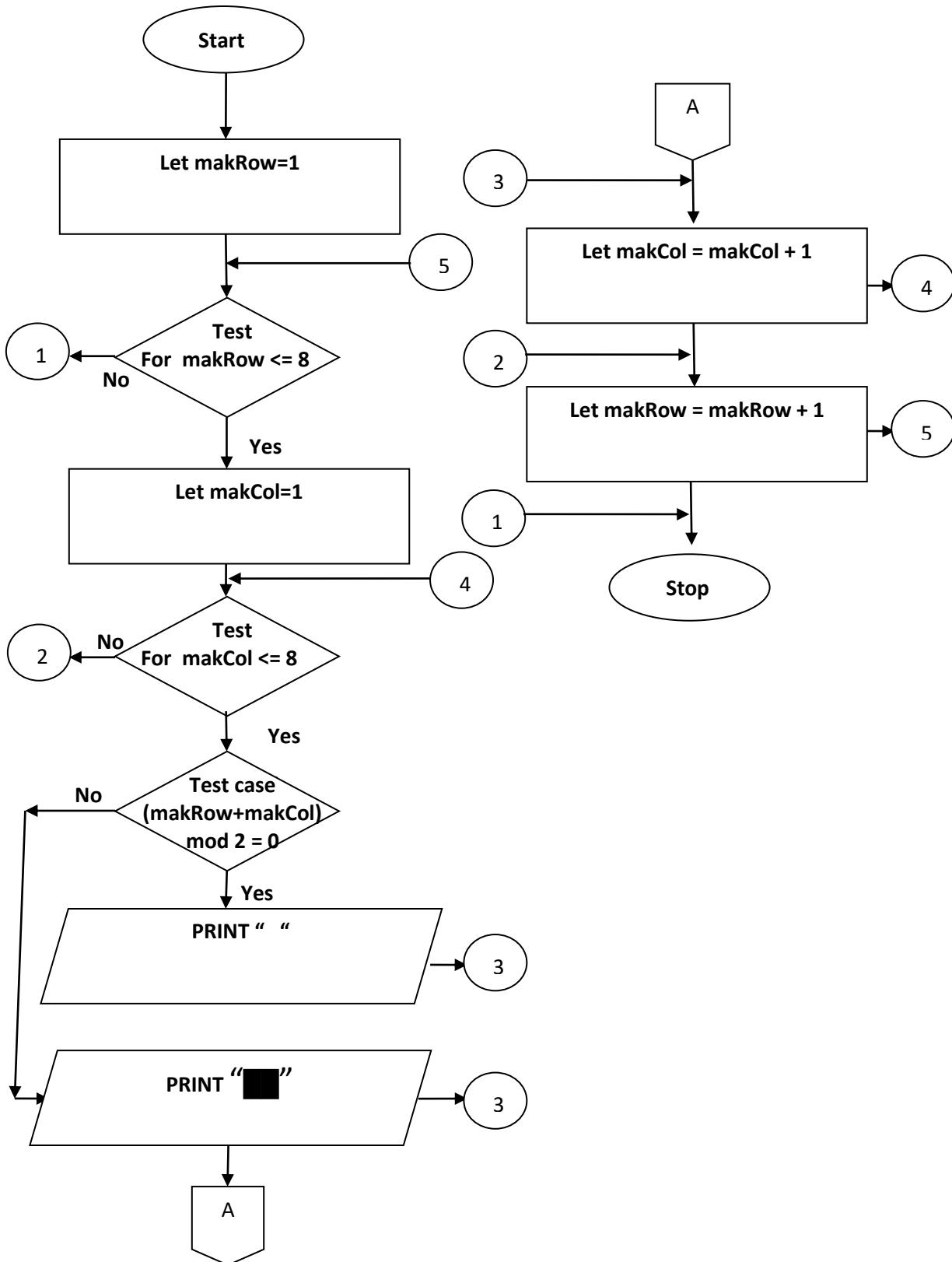
*Enter your age (3-100 etc)? 3*

*Enter your height (5.4/6.0 etc)? 3.25*

*Your Name is Muhammad Hasan Khan Ghori,  
you like English alphabet M,  
you are 3 years old,  
and 3.25 feet tall.*

\*\*\*\*\*\*/

## Practical No.12 (Flow Chart- Switch statement)



### Practical No.12 (Algorithm- Switch Statement)

Step1: BEGIN  
Step2: DECLARE makRow,makCol,result AS integer  
Step3: FOR makRow=1 TO 8 STEP=+1  
Step4: WRITELINE  
Step5: FOR makCol=1 TO 8 STEP=+1  
Step6: SET result=(makRow+makCol) MOD 2  
Step7: IF result= 0 THEN WRITE “ ” ELSE WRITE ”■”  
Step8: END IF  
Step9: NEXT makCol  
Step10:NEXT makRow  
Step11:READ character  
Step12: END

## **Practical No.12 (Coding/Programming)**

*/\* \*\*\*PSGC\*\*\*/PRACTICAL12:Write a program ,which uses Switch and break statement  
.\*\*\*\*\*\*/*

```
#include <stdio.h>
#include <conio.h>
int makRow,makCol,result;           // variable declaration.

void main(void)                  // main function.
{
    // start of-(sof) body of main function.
    clrscr();
    // below code is for showing heading of the output
    printf("\n\t\t_____");
    printf("\n\t\tThis is sample Practical No.12");
    printf("\n\t\t~~~~~");
    printf("\n\n");      // printf two line gap on screen.
    for(makRow=1;makRow<=8;makRow++)
    {
        printf("\n");      // printing line gap on screen.
        for(makCol=1;makCol<=8;makCol++)
        {
            result=(makRow+makCol)%2;

            switch(result)
            {
                // start of switch(result) body.
                case 0:printf(" ");break;
                default:printf("%c%c",219,219); // Ascii code of █ is 219 can also be used.
            }           // end of switch(result)-statement .

        }
        // end of for column loop.
    }
    // end of for row loop.

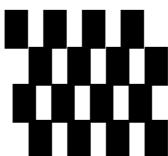
    getch();          // pause screen till any button is pressed.
}                  // end of-(eof) body of main function.
```

*\*\*\*\*\* OUTPUT \*\*\*\*\**

---

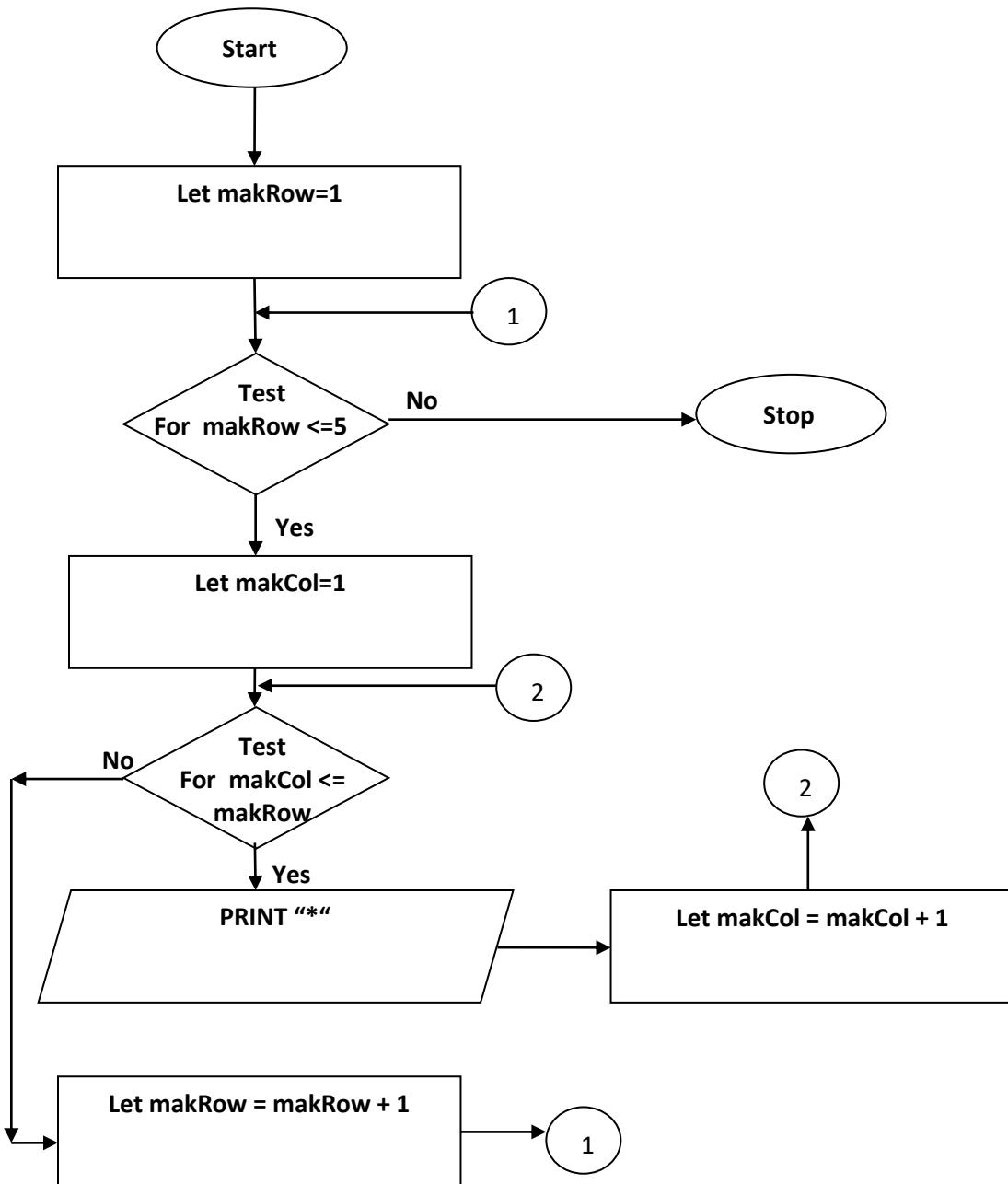
*This is sample Practical No.12*

---



*\*\*\*\*\**

### Practical No.13 (Flow Chart- Pattern Printing)



### Practical No.13 (Algorithm- Pattern Printing)

Step1: BEGIN  
Step2: DECLARE makRow,makCol,result AS integer  
Step3: FOR makRow=1 TO 5 STEP=+1  
Step4: WRITELINE  
Step5: FOR makCol=1 TO makRow STEP=+1  
Step6: WRITE “ \* ”  
Step7: NEXT makCol  
Step8: NEXT makRow  
Step9: READ character  
Step10: END

## Practical No.13 (Coding/Programming)

/\* \*\*\*PSGC\*\*\*/PRACTICAL13: Write a program using nested for loop to print the following output

```

*
*
*
*
*****
*****
```

```

#include <stdio.h>
#include <conio.h>

int makRow,makCol;
;           // variable declaration.

void main(void)           // main function.
{
    // start of-(sof) body of main function.
    clrscr();               // below code is for showing heading of the output
    printf("\n\t\t_____");
    printf("\n\t\tThis is sample Practical No.13");
    printf("\n\t\t~~~~~");
    printf("\n\n");          // printf two line gap on screen.

    for(makRow=1;makCol<=5;makRow++)
    {
        printf("\n\t\t\t");   // printing line and tab gap on screen.
        for(makCol=1;makCol<=makRow;makCol++)
        {
            printf(" *");
        }                   // end of for makCol loop.
    }                     // end of for makRow loop.
    getch();              // pause screen till any button is pressed.
}           // end of-(eof) body of main function.
***** OUTPUT *****
```

---

*This is sample Practical No.13*

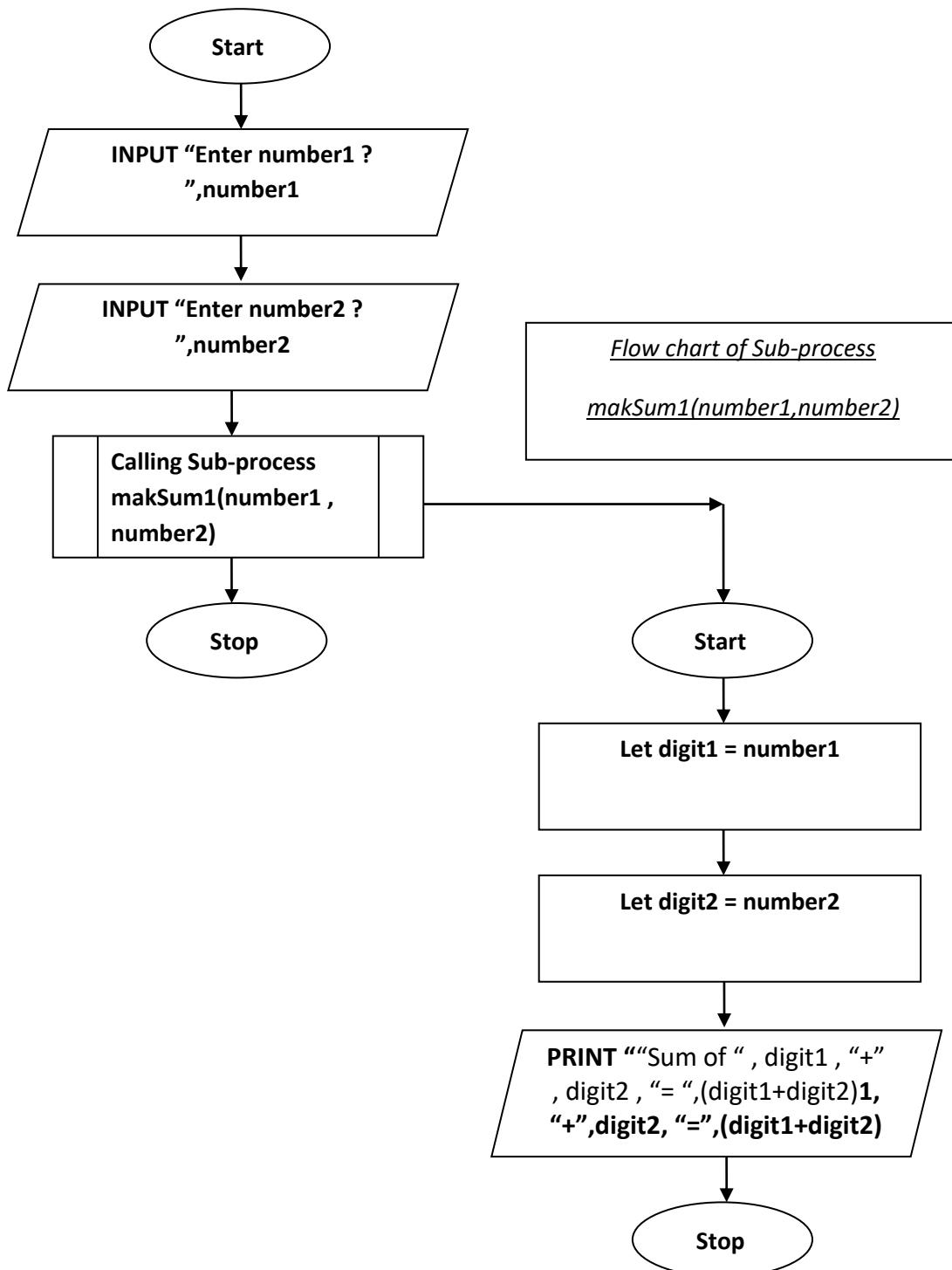
---

```

*
*
*
*
*****
```

```
*****
```

## Practical No.14 (Flow Chart- 2 Nos. SumFunction)



### Practical No.14 (Algorithm- 2 Nos. SumFunction)

Step1: BEGIN

Step2: DECLARE makSum1(integer,integer) AS integer

Step3: DECLARE number1,number2 AS integer

Step4: WRITE “Enter Number1 ?”

Step5: READ number1

Step6: WRITE “Enter Number2 ?”

Step7: READ number2

Step8: *Call makSum1(number1,number2)*

Step9: READ character

Step10: END

Step11: BEGIN makSum1(digit1 AS integer,digit2 AS integer)

Step12: WRITE “Sum of ” , digit1 , “+” , digit2 , “= ”,(digit1+digit2)

Step13: END makSum1

## Practcial No.14 (Coding/Programming)

/\* \*\*\*PSGC\*\*\*/PRACTICAL14: Write a program that input any two number and then pass these numbers as arguments to function sum1 and then print their sum.  
\*\*\*\*\*\*/

```
#include <stdio.h>
#include <conio.h>

void sum1(int,int);           //function sum1 declaration.

int number1,number2;         //variable declaration.

void main(void)              // main function.
{
    clrscr();                // start of-(sof) body of main function.

    // below code is for showing heading of the output
    printf("\n\t\t_____");
    printf("\n\t\tThis is sample Practical No.14");
    printf("\n\t\t~~~~~");
    printf("\n\n");            // printf two line gap on screen.

    printf("\n\t Enter Number1 ? ");
    scanf("%d",&number1);

    printf("\n\t Enter Number2 ? ");
    scanf("%d",&number2);

    sum1(number1,number2);    // calling sum1 function & passing number1 & number2 to it.

    getch();                  // pause screen till any button is pressed.
}                            // end of-(eof) body of main function.

// below is the definition of function sum1.
void sum1(int digit1,int digit2)
{
    // start of sum1 function body.
    printf("\n\t Sum of %d + %d = %d",digit1,digit2,(digit1+digit2));
    return;
}                            // end of sum1 function body.
```

```
***** OUTPUT *****
```

---

*This is sample Practical No.14*

---

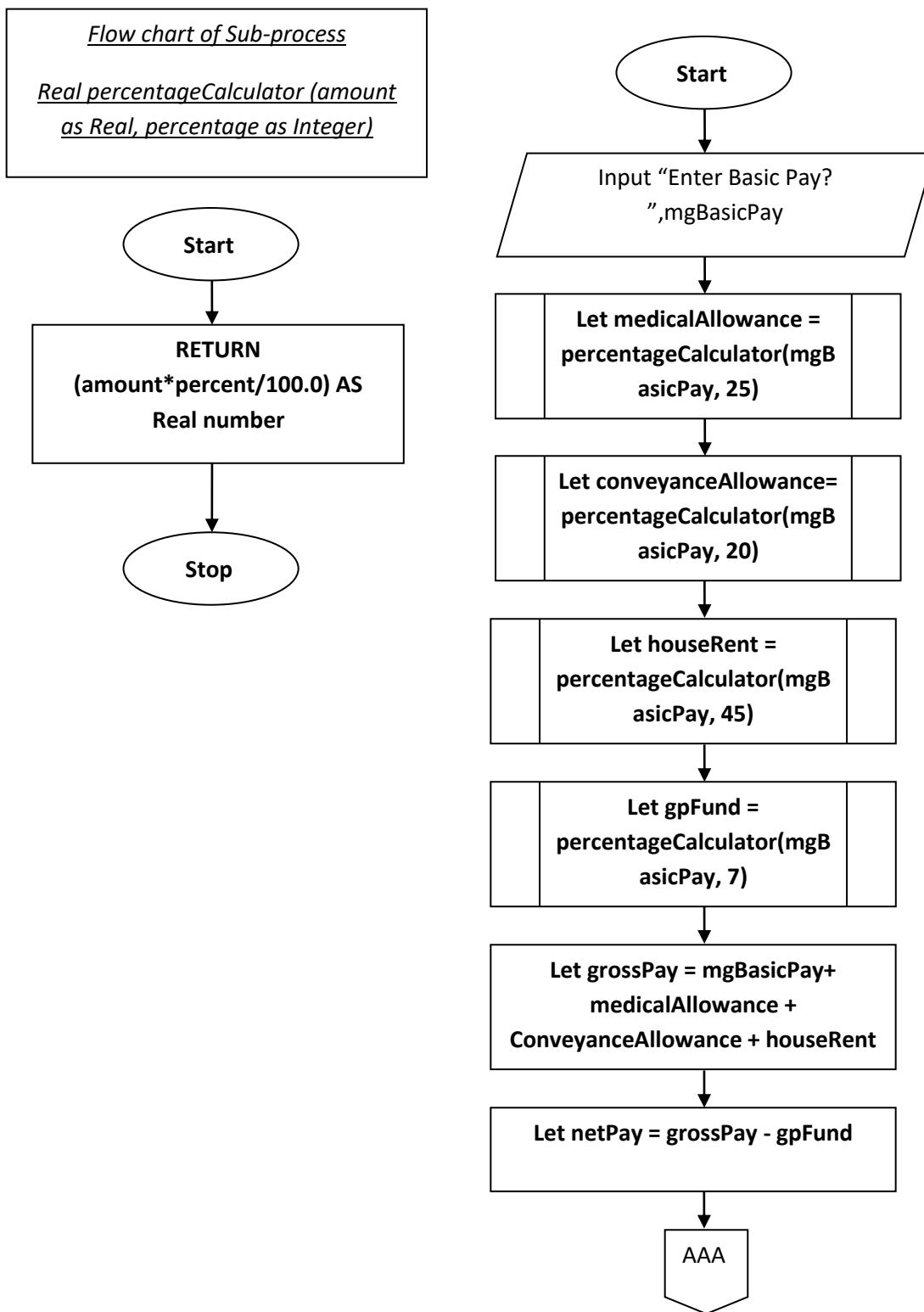
*Enter Number1 ? 7*

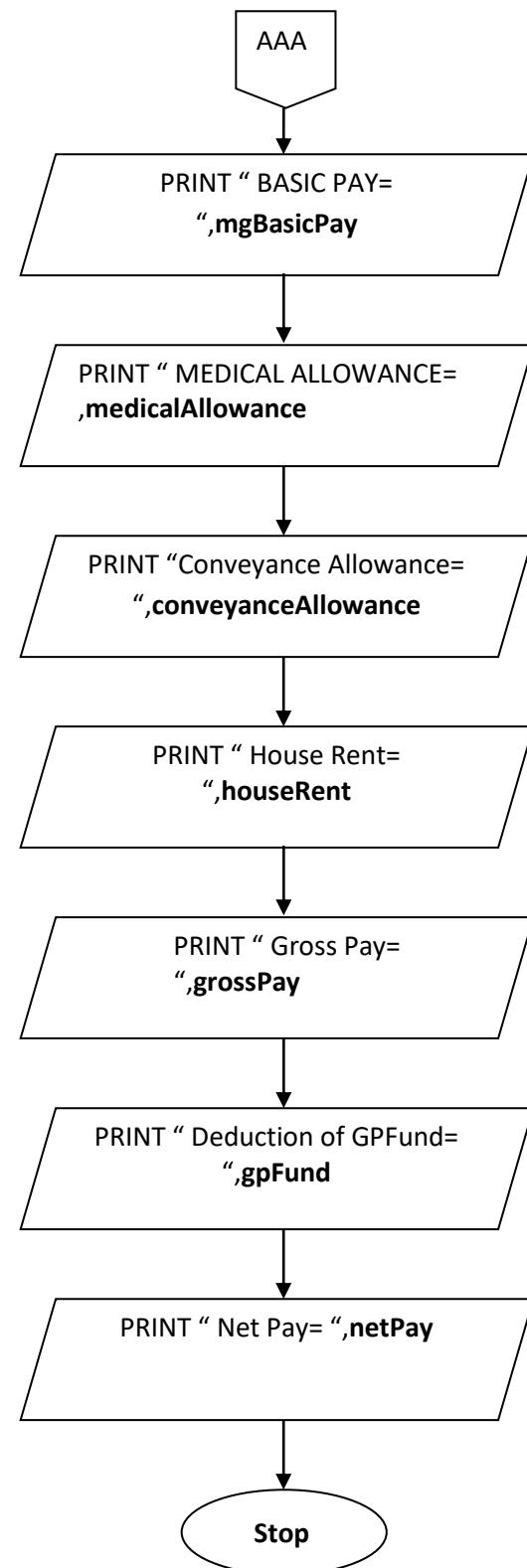
*Enter Number2 ? 6*

*Sum of 7 + 6 = 13*

```
*****/
```

## Practical No.15 (Flow Chart- Payroll of Employee)





## Practical No.15 (Algorithm- Payroll of Employee)

Step1: BEGIN  
Step2: DECLARE percentageCalculator(Realnumber, integer) AS  
Real Number  
Step3: DECLARE mgBasicPay, medicalAllowance,  
conveyanceAllowance, houseRent, gpFund, grossPay, netPay AS  
Real Number  
Step4: WRITE "Enter Basic Pay? "  
Step5: READ mgBasicPay  
Step6: SET medicalAllowance=CALL  
percentageCalculator(mgBasicPay,25)  
Step7: SET conveyanceAllowance = CALL  
percentageCalculator(mgBasicPay,20)  
Step8: SET houseRent = CALL percentageCalculator(mgBasicPay,45)  
Step9: SET gpFund = CALL percentageCalculator(mgBasicPay,7)  
Step10: SET grossPay= mgBasicPay + medicalAllowance +  
conveyanceAllowance + houseRent  
Step11: SET netPay= grossPay-gpFund  
Step12: WRITE " BASIC PAY= ",mgBasicPay  
Step13: WRITE " MEDICAL ALLOWANCE= ",medicalAllowance  
Step14: WRITE " Conveyance Allowance= ",conveyanceAllowance  
Step15: WRITE " House Rent= ",houseRent  
Step16: WRITE " Gross Pay= ",grossPay  
Step17: WRITE " Deduction of GPFund= ",gpFund  
Step18: WRITE " Net Pay= ",netPay  
Step19: READ character  
Step20: END  
Step21: BEGIN FUNCTION percentageCalculator(amount AS Real  
Number,percent AS integer)  
Step22: RETURN (amount\*percent/100.0)  
Step23: END FUNCTION percentageCalculator

### Practical No.15 (Coding/Programming)

/\* \*\*\*PSGC\*\*\*/PRACTICAL15: Write a program to calculate a pay roll of employees .Read the Basic pay from key board .Calculate medical allowance as 25% of basic pay , conveyance allowance as 20% and house rent 45 % of basic pay and deduction of GP fund 7% of basic pay

. Calculate gross pay and net pay .

\*\*\*\*\*

```
#include <stdio.h>
#include <conio.h>

float percentageCalculator(float,int);           // function sum1 declaration.

float mgBasicPay,medicalAllowance,conveyanceAllowance,houseRent,gpFund,grossPay,netPay;

// variable declaration.

void main(void)                                // main function.
{
    clrscr();                                     // start of-(sof) body of main function.

    // below code is for showing heading of the output
    printf("\n\t\t_____");
    printf("\n\t\tThis is sample Practical No.15");
    printf("\n\t\t~~~~~");
    printf("\n\n");                                // printf two line gap on screen.

    printf("\n\t Enter Basic Pay ? ");
    scanf("%f",&mgBasicPay);

    // calling percentageCalculator function & passing values to it.

    medicalAllowance=percentageCalculator(mgBasicPay,25);
    conveyanceAllowance=percentageCalculator(mgBasicPay,20);
    houseRent=percentageCalculator(mgBasicPay,45);
    gpFund=percentageCalculator(mgBasicPay,7);

    grossPay=mgBasicPay+medicalAllowance+conveyanceAllowance+houseRent;
    netPay=grossPay-gpFund;

    printf("\n\t BASIC PAY= %.2f",mgBasicPay);
    printf("\n\t MEDICAL ALLOWANCE= %.2f",medicalAllowance);
    printf("\n\t Conveyance Allowance= %.2f",conveyanceAllowance);
```

```
printf("\n\t House Rent= %.2f",houseRent);

printf("\n\t Gross Pay= %.2f",grossPay);
printf("\n\t Deduction of GPFund= %.2f",gpFund);

printf("\n\t Net Pay= %.2f",netPay);

getch();           // pause screen till any button is pressed.
}               // end of-(eof) body of main function.
```

```
// below is the definition of percentageCalculator function.
float percentageCalculator(float amount,int percent)
{
    // start of function body.
    return (amount*percent/100.0);
}           // end of function body.
```

\*\*\*\*\* OUTPUT \*\*\*\*\*

---

*This is sample Practical No.15*

---

*Enter Basic Pay ? 1000*

*BASIC PAY= 1000.00  
MEDICAL ALLOWANCE= 250.00  
Conveyance Allowance= 200.00  
House Rent= 450.00  
Gross Pay= 1900.00  
Deduction of GPFund= 70.00  
Net Pay= 1830.00*

\*\*\*\*\* /

## **Part-2 Databases**

## Practical No.1

**Object** Write a procedure to create a table Teacher having the following fields

**FacultyId, TeacherName, Designation, Department.**

### Queries

1. Assign primary key to a suitable column.
2. Input 5 records
3. Display all records having same Department
4. List all the records with designation Lecturer.

## Procedure

### Switching on Computer

1- Switch on your computer. Wait till the operation system “Windows” let you give access to interact with the computer.

### Searching and Opening MS-Access

2-With the help of mouse click “Start” Icon, generally present at bottom left side of the computer screen-

3-Use Mouse click “Search Bar”, type “Microsoft Office Access” in it with the help of computer keyboard to search and open **MS-Access**.

### Creating Database

4-Point Mouse Cursor to Blank Database, it will be highlighted then click it with mouse.

5- New panel at right hand side will be open, point your mouse cursor to the file name location, type new name “TeacherDatabase” there then click “Create” button.

### Creating & Renaming Table

6-Another big new panel at right hand side will be open, point your mouse cursor to “Table1: Table” icon, it will be highlighted then right click it, with the mouse. A “drop-down menu” will be open, click second option “Design View” from it.

7- Now “Save As” panel will be open, give new name “Teacher” in the text box to Save “Table1” as “Teacher”, then press “ok” Button.

8-Type in the “Field Name” text value “FacultyID”.

9- Use mouse to point the cell below “Data Type”, select there “Auto Number” from the available “combo box” option list.

10- Use mouse to point the next cell present under “Description” heading, type the description whatever you want to write for your future reference or let it remain empty.

11- Repeat above steps till all the remaining fields (**TeacherName**, **Designation**, **Department**) with “data types” and “description” are properly typed into the corresponding cell of Database Design Window. Always use “Text” data type for fields like [Name, Address, Contact, Email etc.], “AutoNumber” for automatic assignment of numbers. “Numeric” for fields on which calculation are performed, “Currency” for fields like [wages, salary], “Date” for fields which are supposed to store dates, “Hyperlink” for fields holding [websites / urls etc.], “OLE Object” for picture, photographs, “Yes/No” for status showing field, “Attachment” for external files, “Memo” for descriptive fields. “Lookup Wizard” for foreign fields from other tables of the database.

12-

**Requirement#1- Assigning Primary Key** to the suitable field i.e “FacultyId” which can be capable of identifying each record uniquely. If it is already assigned by computer then no need to re-assign it.

| Teacher |             |            |                              |
|---------|-------------|------------|------------------------------|
|         | Field Name  | Data Type  | Description                  |
| ▼       | FacultyId   | AutoNumber | identification Number        |
|         | TeacherName | Text       | Name of teacher              |
|         | Designation | Text       | Rank,Designation of computer |
|         | Department  | Text       | Department of computer       |

13-Save the Table once again to update changes.

14

**Requirement#2- Entering Five(5) Records**

14-Now double click “Teacher” table to open it. Enter valid data into it. Use mouse to toggle b/w the fields of each record. Continue adding the record until you complete entering desired records. After it, close & finish record entry.

| FacultyId | TeacherName             | Designation         | Department       |
|-----------|-------------------------|---------------------|------------------|
| 1         | Mohsin Ahmed Khan Ghori | Lecturer            | Computer Science |
| 2         | Shahzada Waseem         | Assistant Professor | Computer Science |
| 3         | Khawar                  | Assistant Professor | Computer Science |
| 4         | Jamshid Hashmi          | Lecturer            | Physics          |
| 5         | Asad Munir              | Assistant Professor | Physics          |

## Queries Design

15-With the help of mouse click “Create”, then point and left click “Query Design”.

17- “Show table” panel will be open, select ” Table” tab from “Table/Query/Both”. Point and double left click the desired tables from available list of tables, to add these tables then left click “cross/close” present on top-right hand side of the panel, to close it.

18- Select field name from the available list of “combo-box”, which you want to display or manipulate. Table name of that particular field will automatically be added after your selection of field. Mention the criteria if you want. Uncheck the “CheckBox” if you don’t want to display this field.

19- Do repeat above step number 19 for each and every field, you want more to display or manipulate until you complete all desired field entries

20- Now in the “criteria” cell of field “Department” enter the contents “Computer Science” to create the query of “all records having same department” and then Left click the “Cross/Close” button to close the Query Panel, left click “Yes” Button to save the Query1 with the new name “TeacherQuery1”, again left click “Ok” Button. You can save query with your desired name as well.

21- Repeat from above step number 17 to 21 for creating remaining queries, just remove the contents of criteria cell, as per your requirement i.e. remove the contents

of field “Department” and enter the contents “**Lecturer**” in the criteria cell of “**Designation**” field, to “list all the records with designation (Lecturer)”.

## **Obtaining Query Results**

22-Double click any query to display its result, if there is a need of passing any value then just type-in the value you want to pass into the panel that appears before you.

## **Output**

### **Requirement#3. Teachers of same Department.**

| Teachers of same department |                         |                     |                  |
|-----------------------------|-------------------------|---------------------|------------------|
| FacultyId                   | TeacherName             | Designation         | Department       |
| 1                           | Mohsin Ahmed Khan Ghori | Lecturer            | Computer Science |
| 2                           | Shahzada Waseem         | Assistant Professor | Computer Science |
| 3                           | Khawar                  | Assistant Professor | Computer Science |

### **Requirement#4. Teachers of same Designation.**

| Teachers of same department   Teachers of same designation |                         |             |                  |
|------------------------------------------------------------|-------------------------|-------------|------------------|
| FacultyId                                                  | TeacherName             | Designation | Department       |
| 1                                                          | Mohsin Ahmed Khan Ghori | Lecturer    | Computer Science |
| 4                                                          | Jamshid Hashmi          | Lecturer    | Physics          |

### Practical No.2

**Object** Write a procedure to create a table Student having the following fields

**StudentId, StudentName, Address, Cellno**

#### Queries

1. Assign primary key to a suitable column.
2. Input 5 records
3. Display all records
4. Search record with StudentID.

### Procedure

#### Switching on Computer

1- Switch on your computer. Wait till the operation system “**Windows**” let you give access to interact with the computer.

#### Searching and Opening MS-Access

2-With the help of mouse click “**Start**” Icon, generally present at bottom left side of the computer screen-

3-Use Mouse click “**Search Bar**”, type “**Microsoft Office Access**” in it with the help of computer keyboard to search and open **MS-Access**.

#### Creating Database

4-Point Mouse Cursor to Blank Database, it will be highlighted then click it with mouse.

5- New panel at right hand side will be open, point your mouse cursor to the file name location, type new name “**StudentDatabase**” there then click “**Create**” button.

#### Creating & Renaming Table

6-Another big new panel at right hand side will be open, point your mouse cursor to “**Table1: Table**” icon, it will be highlighted then right click it, with the mouse. A “**drop-down menu**” will be open, click second option “**Design View**” from it.

7- Now “Save As” panel will be open, give new name “**Student**” in the text box to Save “Table1” as “**Student**”, then press “**ok**” Button.

8-Type in the “**Field Name**” text value “**StudentId**”.

9- Use mouse to point the cell below “**Data Type**”, select there “**Auto Number**” from the available “**combo box**” option list.

10- Use mouse to point the next cell present under “**Description**” heading, type the description whatever you want to write for your future reference or let it remain empty.

11- Repeat above steps till all the remaining **fields (StudentName, Address, Cellno)** with “**data types**” and “**description**” are properly typed into the corresponding cell of Database Design Window. Always use “**Text**” data type for fields like [Name, Address, Contact, Email etc.], “**AutoNumber**” for automatic assignment of numbers. “**Numeric**” for fields on which calculation are performed, “**Currency**” for fields like [wages, salary], “**Date**” for fields which are supposed to store dates, “**Hyperlink**” for fields holding [websites / urls etc.], “**OLE Object**” for picture, photographs, “**Yes/No**” for status showing field, “**Attachment**” for external files, “**Memo**” for descriptive fields. “**Lookup Wizard**” for foreign fields from other tables of the database.

12-

**Requirement#1- Assigning Primary Key** to the suitable field i.e “**StudentId**” which can be capable of identifying each record uniquely. If it is already assigned by computer then no need to re-assign it.

| Student |             |            |                       |
|---------|-------------|------------|-----------------------|
|         | Field Name  | Data Type  | Description           |
| ↑       | StudentId   | AutoNumber | identification Number |
|         | StudentName | Text       | Name of Student       |
|         | Address     | Text       | Address of student    |
|         | Cellno      | Text       | phone number          |

13-Save the Table once again to update changes.

## **Requirement#2- Entering Five(5) Records**

14-Now double click “Student” table to open it. Enter valid data into it. Use mouse to toggle b/w the fields of each record. Continue adding the record until you complete entering desired records. After it, close & finish record entry.

| StudentId | StudentName         | Address                          | Cellno          |
|-----------|---------------------|----------------------------------|-----------------|
| 1         | Noman               | R-2000/2 Azizabad Federal-B Area | (+92)3002535970 |
| 2         | Junaid Ur Rehman    | D-121 Block A North Nazimabad    | (+92)3002535971 |
| 3         | Adul Samad Shafiq   | Flat No.1 Orangi Town Karachi    | (+92)3332535970 |
| 4         | Wasif Ghori         | A-539 Block I North Nazimabad    | (+92)3002535983 |
| 5         | Syed Azhar Ul Islam | B-490 Model Colony Malir         | (+92)3303535970 |

## **Queries Design**

15-With the help of mouse click “Create”, then point and left click “Query Design”.

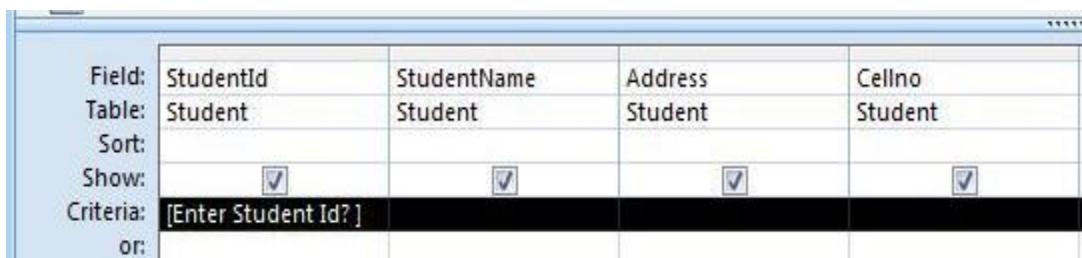
17- “Show table” panel will be open, select ” Table” tab from “Table/Query/Both”. Point and double left click the desired tables from available list of tables, to add these tables then left click “cross/close” present on top-right hand side of the panel, to close it.

18- Select field name from the available list of “combo-box”, which you want to display or manipulate. Table name of that particular field will automatically be added after your selection of field. Mention the criteria if you want. Uncheck the “CheckBox” if you don’t want to display this field.

19- Do repeat above step number 19 for each and every field, you want more to display or manipulate until you complete all desired field entries

20- Now in the “criteria” cell of field “StudentId” enter the contents “[Enter Student Id?]” to create the query of “Showing student record by Student Id” and then Left click the “Cross/Close” button to close the Query Panel, left click “Yes” Button to save the Query1 with the new name “Student By ID”, again left click “Ok” Button. You can save query with your desired name as well.

21- Repeat from above step number 17 to 21 for creating remaining queries, just remove/change the contents of criteria cell, as per your requirement.



## Obtaining Query Results

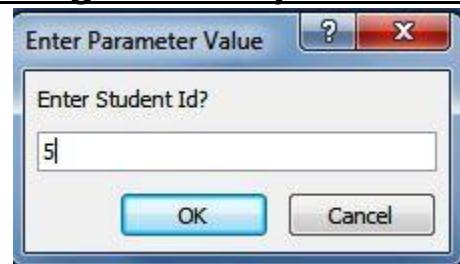
22-Double click any query to display its result, if there is a need of passing any value then just type-in the value you want to pass into the panel that appears before you.

## Output

### Requirement#3- Showing all Five(5) Records

| Student   |                     |                                  |                 |  |
|-----------|---------------------|----------------------------------|-----------------|--|
| StudentId | StudentName         | Address                          | Cellno          |  |
| 1         | Noman               | R-2000/2 Azizabad Federal-B Area | (+92)3002535970 |  |
| 2         | Junaid Ur Rehman    | D-121 Block A North Nazimabad    | (+92)3002535971 |  |
| 3         | Adul Samad Shafiq   | Flat No.1 Orangi Town Karachi    | (+92)3332535970 |  |
| 4         | Wasif Ghori         | A-539 Block I North Nazimabad    | (+92)3002535983 |  |
| 5         | Syed Azhar Ul Islam | B-490 Model Colony Malir         | (+92)3303535970 |  |

### Requirement#4- Showing Record by Student Id



| Student By ID |                     |                          |                 |  |
|---------------|---------------------|--------------------------|-----------------|--|
| StudentId     | StudentName         | Address                  | Cellno          |  |
| 5             | Syed Azhar Ul Islam | B-490 Model Colony Malir | (+92)3303535970 |  |

### Practical No.3

**Object** Write a procedure to create a table Students having the following fields

**StudentId, Name, Class, Group, Gender.**

#### Queries

1. Assign primary key to StudentId.
2. Input 5 records
3. Display all records of Female students
4. List all the records of students

### Procedure

#### Switching on Computer

1- Switch on your computer. Wait till the operation system “**Windows**” let you give access to interact with the computer.

#### Searching and Opening MS-Access

2-With the help of mouse click “**Start**” Icon, generally present at bottom left side of the computer screen-

3-Use Mouse click “**Search Bar**”, type “**Microsoft Office Access**” in it with the help of computer keyboard to search and open **MS-Access**.

#### Creating Database

4-Point Mouse Cursor to Blank Database, it will be highlighted then click it with mouse.

5- New panel at right hand side will be open, point your mouse cursor to the file name location, type new name “**StudentsDatabase**” there then click “**Create**” button.

#### Creating & Renaming Table

6-Another big new panel at right hand side will be open, point your mouse cursor to “**Table1: Table**” icon, it will be highlighted then right click it, with the mouse. A “**drop-down menu**” will be open, click second option “**Design View**” from it.

7- Now “Save As” panel will be open, give new name “**Students**” in the text box to Save “Table1” as “**Students**”, then press “ok” Button.

8-Type in the “**Field Name**” text value “**StudentID**”.

9- Use mouse to point the cell below “**Data Type**”, select there “**Auto Number**” from the available “**combo box**” option list.

10- Use mouse to point the next cell present under “**Description**” heading, type the description whatever you want to write for your future reference or let it remain empty.

11- Repeat above steps till all the remaining fields (**StudentName, Class, Group, Gender**) with “**data types**” and “**description**” are properly typed into the corresponding cell of Database Design Window. Always use “**Text**” data type for fields like [Name, Address, Contact, Email etc.], “**AutoNumber**” for automatic assignment of numbers. “**Numeric**” for fields on which calculation are performed, “**Currency**” for fields like [wages, salary], “**Date**” for fields which are supposed to store dates, “**Hyperlink**” for fields holding [websites / urls etc.], “**OLE Object**” for picture, photographs, “**Yes/No**” for status showing field, “**Attachment**” for external files, “**Memo**” for descriptive fields. “**Lookup Wizard**” for foreign fields from other tables of the database.

12-

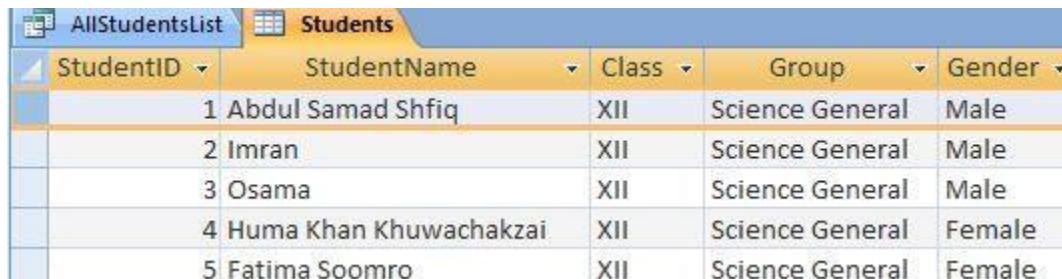
**Requirement#1- Assigning Primary Key** to the suitable field i.e “**StudentID**” which can be capable of identifying each record uniquely. If it is already assigned by computer then no need to re-assign it.

| Students |             |            |                                                               |
|----------|-------------|------------|---------------------------------------------------------------|
|          | Field Name  | Data Type  | Description                                                   |
| key      | StudentID   | AutoNumber | Identification Number                                         |
|          | StudentName | Text       | Name of Student                                               |
|          | Class       | Text       | Student Class                                                 |
|          | Group       | Text       | Pre-Engineering , Pre-Medical, Science General, Commerce etc. |
|          | Gender      | Text       | Male / Female                                                 |

13-Save the Table once again to update changes.

## **Requirement#2- Entering Five(5) Records**

14-Now double click “**Students**” table to open it. Enter valid data into it. Use mouse to toggle b/w the fields of each record. Continue adding the record until you complete entering desired records. After it, close & finish record entry.



The screenshot shows a Microsoft Access database window with the 'Students' table selected. The table has columns: StudentID, StudentName, Class, Group, and Gender. The data is as follows:

| StudentID | StudentName            | Class | Group           | Gender |
|-----------|------------------------|-------|-----------------|--------|
| 1         | Abdul Samad Shfiq      | XII   | Science General | Male   |
| 2         | Imran                  | XII   | Science General | Male   |
| 3         | Osama                  | XII   | Science General | Male   |
| 4         | Huma Khan Khuwachakzai | XII   | Science General | Female |
| 5         | Fatima Soomro          | XII   | Science General | Female |

## **Queries Design**

15-With the help of mouse click “**Create**”, then point and left click “**Query Design**”.

17- “**Show table**” panel will be open, select ” **Table**” tab from “**Table/Query/Both**”. Point and double left click the desired tables from available list of tables, to add these tables then left click “**cross/close**” present on top-right hand side of the panel, to close it.

18- Select field name from the available list of “combo-box”, which you want to display or manipulate. Table name of that particular field will automatically be added after your selection of field. Mention the criteria if you want. Uncheck the “**CheckBox**” if you don’t want to display this field.

19- Do repeat above step number 19 for each and every field, you want more to display or manipulate until you complete all desired field entries

20- Now in the “**criteria**” cell of field “**Gender**” enter the contents “**Female**” to create the query of “all female records” and then Left click the “**Cross/Close**” button to close the Query Panel, left click “**Yes**” Button to save the Query1 with the new name “**FemaleStudents**”, again left click “**Ok**” Button. You can save query with your desired name as well.

21- Repeat from above step number 17 to 21 for creating remaining queries, just remove/change the contents of criteria cell, as per your requirement.

## **Obtaining Query Results**

22-Double click any query to display its result, if there is a need of passing any value then just type-in the value you want to pass into the panel that appears before you.

## Output

### Requirement#3- Showing all records of female students

| FemaleStudents |                        |       |                 |        |
|----------------|------------------------|-------|-----------------|--------|
| StudentID      | StudentName            | Class | Group           | Gender |
| 4              | Huma Khan Khuwachakzai | XII   | Science General | Female |
| 5              | Fatima Soomro          | XII   | Science General | Female |

### Requirement#4- Showing all Five(5) Records

| AllStudentsList |                        |       |                 |        |
|-----------------|------------------------|-------|-----------------|--------|
| StudentID       | StudentName            | Class | Group           | Gender |
| 1               | Abdul Samad Shfiq      | XII   | Science General | Male   |
| 2               | Imran                  | XII   | Science General | Male   |
| 3               | Osama                  | XII   | Science General | Male   |
| 4               | Huma Khan Khuwachakzai | XII   | Science General | Female |
| 5               | Fatima Soomro          | XII   | Science General | Female |

### Practical No.4

**Object** Write a procedure to create a table MyBank having the following fields

**AccountNo, AccountName,Credit, Debit.**

#### Queries

1. Assign primary key to a suitable column.
2. Input 5 records
3. Add a column Balance
4. Update the column Balance.

### Procedure

#### Switching on Computer

1- Switch on your computer. Wait till the operation system “**Windows**” let you give access to interact with the computer.

#### Searching and Opening MS-Access

2-With the help of mouse click “**Start**” Icon, generally present at bottom left side of the computer screen-

3-Use Mouse click “**Search Bar**”, type “**Microsoft Office Access**” in it with the help of computer keyboard to search and open **MS-Access**.

#### Creating Database

4-Point Mouse Cursor to Blank Database, it will be highlighted then click it with mouse.

5- New panel at right hand side will be open, point your mouse cursor to the file name location, type new name “**MyBankDatabase**” there then click “**Create**” button.

#### Creating & Renaming Table

6-Another big new panel at right hand side will be open, point your mouse cursor to “**Table1: Table**” icon, it will be highlighted then right click it, with the mouse. A “**drop-down menu**” will be open, click second option “**Design View**” from it.

7- Now “Save As” panel will be open, give new name “MyBank” in the text box to Save “Table1” as “MyBank”, then press “ok” Button.

8-Type in the “Field Name” text value “AccountNo”.

9- Use mouse to point the cell below “Data Type”, select there “Auto Number” from the available “combo box” option list.

10- Use mouse to point the next cell present under “Description” heading, type the description whatever you want to write for your future reference or let it remain empty.

11- Repeat above steps till all the remaining fields (AccountName, Credit, Debit) with “data types” and “description” are properly typed into the corresponding cell of Database Design Window. Always use “Text” data type for fields like [Name, Address, Contact, Email etc.], “AutoNumber” for automatic assignment of numbers. “Numeric” for fields on which calculation are performed, “Currency” for fields like [wages, salary], “Date” for fields which are supposed to store dates, “Hyperlink” for fields holding [websites / urls etc.], “OLE Object” for picture, photographs, “Yes/No” for status showing field, “Attachment” for external files, “Memo” for descriptive fields. “Lookup Wizard” for foreign fields from other tables of the database.

12-

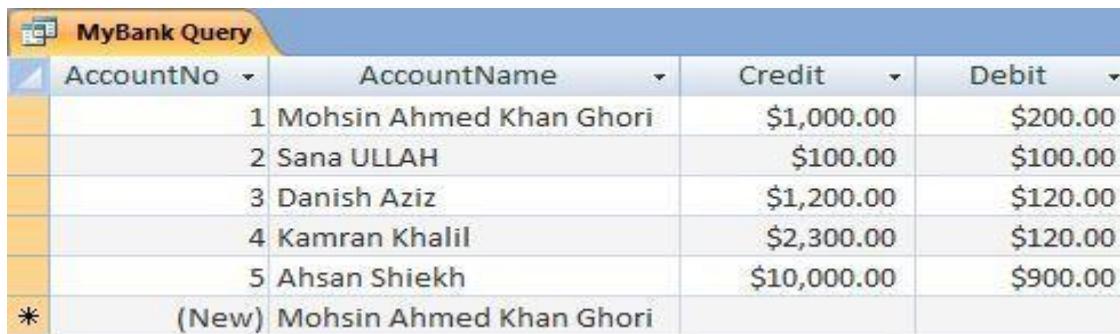
**Requirement#1- Assigning Primary Key** to the suitable field i.e “AccountNo” which can be capable of identifying each record uniquely. If it is already assigned by computer then no need to re-assign it.

| MyBank      |             |            |                  |
|-------------|-------------|------------|------------------|
|             | Field Name  | Data Type  | Description      |
| (AccountNo) | AccountNo   | AutoNumber | Account Number   |
|             | AccountName | Text       | Title of Account |
|             | Credit      | Currency   | Total Credit     |
|             | Debit       | Currency   | Total Debit      |

13-Save the Table once again to update changes.

## **Requirement#2- Entering Five(5) Records**

14-Now double click “MyBank” table to open it. Enter valid data into it. Use mouse to toggle b/w the fields of each record. Continue adding the record until you complete entering desired records. After it, close & finish record entry.



| AccountNo | AccountName                   | Credit      | Debit    |
|-----------|-------------------------------|-------------|----------|
| 1         | Mohsin Ahmed Khan Ghori       | \$1,000.00  | \$200.00 |
| 2         | Sana ULLAH                    | \$100.00    | \$100.00 |
| 3         | Danish Aziz                   | \$1,200.00  | \$120.00 |
| 4         | Kamran Khalil                 | \$2,300.00  | \$120.00 |
| 5         | Ahsan Shiekh                  | \$10,000.00 | \$900.00 |
| *         | (New) Mohsin Ahmed Khan Ghori |             |          |

## Queries Design

15-With the help of mouse click “Create”, then point and left click “Query Design”.

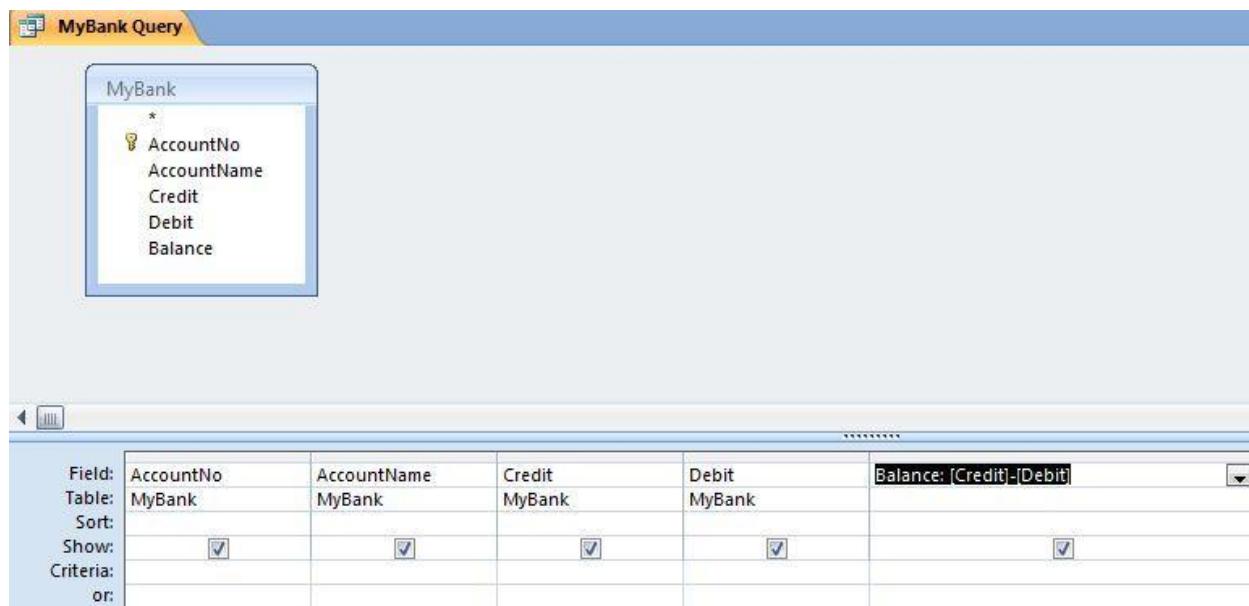
17- “Show table” panel will be open, select ” Table” tab from “Table/Query/Both”. Point and double left click the desired tables from available list of tables, to add these tables then left click “cross/close” present on top-right hand side of the panel, to close it.

18- Select field name from the available list of “combo-box”, which you want to display or manipulate. Table name of that particular field will automatically be added after your selection of field. Mention the criteria if you want. Uncheck the “CheckBox” if you don’t want to display this field.

19- Do repeat above step number 19 for each and every field, you want more to display or manipulate until you complete all desired field entries

20- Now add new column “Balance” in the query “MyBank Query” in “design view”. Write like this “Balance:[Credit]\*[Debit]” in the Field corresponding cell to make it calculated field to create the query of “all records show balance” and then Left click the “Cross/Close” button to close the Query Panel, left click “Yes” Button to save the Query1 with the new name “MyBank Query”, again left click “Ok” Button. You can save query with your desired name as well.

21- Repeat from above step number 17 to 21 for creating remaining queries, just remove the contents of criteria cell, as per your requirement.



## Obtaining Query Results

22-Double click any query to display its result, if there is a need of passing any value then just type-in the value you want to pass into the panel that appears before you.

## Output

### Requirement#3- Inserting Balance Column

| MyBank |           |                         |        |       |
|--------|-----------|-------------------------|--------|-------|
|        | AccountNo | AccountName             | Credit | Debit |
| *      | (New)     | Mohsin Ahmed Khan Ghori |        |       |
|        |           |                         |        |       |
|        |           |                         |        |       |

### Requirement#4- Updating Balance Column

| MyBank Query |           |                         |             |          |
|--------------|-----------|-------------------------|-------------|----------|
|              | AccountNo | AccountName             | Credit      | Debit    |
|              | 1         | Mohsin Ahmed Khan Ghori | \$1,000.00  | \$200.00 |
|              | 2         | Sana ULLAH              | \$100.00    | \$100.00 |
|              | 3         | Danish Aziz             | \$1,200.00  | \$120.00 |
|              | 4         | Kamran Khalil           | \$2,300.00  | \$120.00 |
|              | 5         | Ahsan Shiekh            | \$10,000.00 | \$900.00 |
| *            | (New)     | Mohsin Ahmed Khan Ghori |             |          |

### Practical No.5

**Object** Write a procedure to create a table Library having the following fields

**BookId, Name, Reference or Lending, BookIssued.**

#### Queries

1. Assign primary key to a suitable column.
2. Input 5 records
3. Display all books which are not for lending
4. Find list of books issued.

### Procedure

#### Switching on Computer

1- Switch on your computer. Wait till the operation system “**Windows**” let you give access to interact with the computer.

#### Searching and Opening MS-Access

2-With the help of mouse click “**Start**” Icon, generally present at bottom left side of the computer screen-

3-Use Mouse click “**Search Bar**”, type “**Microsoft Office Access**” in it with the help of computer keyboard to search and open **MS-Access**.

#### Creating Database

4-Point Mouse Cursor to Blank Database, it will be highlighted then click it with mouse.

5- New panel at right hand side will be open, point your mouse cursor to the file name location, type new name “**LibraryDatabase**” there then click “**Create**” button.

#### Creating & Renaming Table

6-Another big new panel at right hand side will be open, point your mouse cursor to “**Table1: Table**” icon, it will be highlighted then right click it, with the mouse. A “**drop-down menu**” will be open, click second option “**Design View**” from it.

7- Now “Save As” panel will be open, give new name “Library” in the text box to Save “Table1” as “Library”, then press “ok” Button.

8-Type in the “Field Name” text value “BookId”.

9- Use mouse to point the cell below “Data Type”, select there “Auto Number” from the available “combo box” option list.

10- Use mouse to point the next cell present under “Description” heading, type the description whatever you want to write for your future reference or let it remain empty.

11- Repeat above steps till all the remaining fields (**BookName**, **Reference**, **Issued**) with “data types” and “description” are properly typed into the corresponding cell of Database Design Window. Always use “Text” data type for fields like [Name, Address, Contact, Email etc.], “AutoNumber” for automatic assignment of numbers. “Numeric” for fields on which calculation are performed, “Currency” for fields like [wages, salary], “Date” for fields which are supposed to store dates, “Hyperlink” for fields holding [websites / urls etc.], “OLE Object” for picture, photographs, “Yes/No” for status showing field, “Attachment” for external files, “Memo” for descriptive fields. “Lookup Wizard” for foreign fields from other tables of the database.

12-

**Requirement#1- Assigning Primary Key** to the suitable field i.e “BookId” which can be capable of identifying each record uniquely. If it is already assigned by computer then no need to re-assign it.

13-Save the Table once again to update changes.

### **Requirement#2- Entering Five(05) Records**

14-Now double click “Library” table to open it. Enter valid data into it. Use mouse to toggle b/w the fields of each record. Continue adding the record until you complete entering desired records. After it, close & finish record entry.

| BookId | BookName                                       | Reference                           | Issued                              |
|--------|------------------------------------------------|-------------------------------------|-------------------------------------|
| 1      | C Language by Robert Lafore                    | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| 2      | XII Book by Prof. Shahzada Wasim               | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 3      | The 10 Programmings by Mohsin Ahmed Khan Ghori | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 4      | C Language by Robert Lafore                    | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| 5      | C++ Language by Naba Barkakati                 | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

## Queries Design

15-With the help of mouse click “Create”, then point and left click “Query Design”.

17- “Show table” panel will be open, select ” Table” tab from “Table/Query/Both”. Point and double left click the desired tables from available list of tables, to add these tables then left click “cross/close” present on top-right hand side of the panel, to close it.

18- Select field name from the available list of “combo-box”, which you want to display or manipulate. Table name of that particular field will automatically be added after your selection of field. Mention the criteria if you want. Uncheck the “CheckBox” if you don’t want to display this field.

19- Do repeat above step number 19 for each and every field, you want more to display or manipulate until you complete all desired field entries

20- Now in the “criteria” cell of field “Reference” enter the contents “Yes” to create the query of “all books not for lending (Reference Books)” and then Left click the “Cross/Close” button to close the Query Panel, left click “Yes” Button to save the Query1 with the new name “Reference Books(Not for Lending)”, again left click “Ok” Button. You can save query with your desired name as well.

21- Repeat from above step number 17 to 21 for creating remaining queries, just remove/change the contents of criteria cell, as per your requirement.

|           |                                     |                                     |                                     |                                     |
|-----------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| Field:    | BookId                              | BookName                            | Reference                           | Issued                              |
| Table:    | Library                             | Library                             | Library                             | Library                             |
| Sort:     |                                     |                                     |                                     |                                     |
| Show:     | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Criteria: |                                     | No                                  | Yes                                 |                                     |
| or:       |                                     |                                     |                                     |                                     |

## Obtaining Query Results

22-Double click any query to display its result, if there is a need of passing any value then just type-in the value you want to pass into the panel that appears before you.

## **Output**

### **Requirement# 3- Showing Reference Books which are not for lending**

| Reference Books(Not for Lending) |                              |                                     |                          |
|----------------------------------|------------------------------|-------------------------------------|--------------------------|
| BookId                           | BookName                     | Reference                           | Issued                   |
| 1                                | C Language by Jamshid Hashmi | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 4                                | C Language by Robert Lafore  | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

### **Requirement#4- List of issued Books**

| Lending Books |                                                |                          |                                     |
|---------------|------------------------------------------------|--------------------------|-------------------------------------|
| BookId        | BookName                                       | Reference                | Issued                              |
| 2             | XII Book by Prof. Shahzada Wasim               | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3             | The 10 Programmings by Mohsin Ahmed Khan Ghori | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

### Practical No.6

**Object** Write a procedure to create a table Employees having the following fields

**EmployeeId, EmployeeName, Address, Postcode, DateHired, Wages.**

#### Queries

1. Assign primary key to a suitable column.
2. Input 5 records
3. Display particular record by EmployeeId
4. Display those records who have the same Address.

### Procedure

#### Switching on Computer

1- Switch on your computer. Wait till the operation system “Windows” let you give access to interact with the computer.

#### Searching and Opening MS-Access

2-With the help of mouse click “Start” Icon, generally present at bottom left side of the computer screen-

3-Use Mouse click “Search Bar”, type “Microsoft Office Access” in it with the help of computer keyboard to search and open **MS-Access**.

#### Creating Database

4-Point Mouse Cursor to Blank Database, it will be highlighted then click it with mouse.

5- New panel at right hand side will be open, point your mouse cursor to the file name location, type new name “EmployeeDatabase” there then click “Create” button.

## Creating & Renaming Table

6-Another big new panel at right hand side will be open, point your mouse cursor to “Table1: Table” icon, it will be highlighted then right click it, with the mouse. A “drop-down menu” will be open, click second option “Design View” from it.

7- Now “Save As” panel will be open, give new name “Employee” in the text box to Save “Table1” as “Employee”, then press “ok” Button.

8-Type in the “Field Name” text value “EmployeeID”.

9- Use mouse to point the cell below “Data Type”, select there “Auto Number” from the available “combo box” option list.

10- Use mouse to point the next cell present under “Description” heading, type the description whatever you want to write for your future reference or let it remain empty.

11- Repeat above steps till all the remaining fields (EmployeeName, Address, Postcode, DateHired) with “data types” and “description” are properly typed into the corresponding cell of Database Design Window. Always use “Text” data type for fields like [Name, Address, Contact, Email etc.], “AutoNumber” for automatic assignment of numbers. “Numeric” for fields on which calculation are performed, “Currency” for fields like [wages, salary], “Date” for fields which are supposed to store dates, “Hyperlink” for fields holding [websites / urls etc.], “OLE Object” for picture, photographs, “Yes/No” for status showing field, “Attachment” for external files, “Memo” for descriptive fields. “Lookup Wizard” for foreign fields from other tables of the database.

12-

**Requirement#1- Assigning Primary Key** to the suitable field i.e “EmployeeID” which can be capable of identifying each record uniquely. If it is already assigned by computer then no need to re-assign it.

| Employee     |            |                                |             |
|--------------|------------|--------------------------------|-------------|
|              | Field Name | Data Type                      | Description |
| EmployeeID   | AutoNumber | Identification Number          |             |
| EmployeeName | Text       | Name of Employee               |             |
| Address      | Text       | Employee Address               |             |
| Postcode     | Text       | Postal code of employee        |             |
| DateHired    | Date/Time  | Date of hiring of the Employee |             |

13-Save the Table once again to update changes.

## Requirement#2-Entering Five(5) Records

14-Now double click “Employee” table to open it. Enter valid data into it. Use mouse to toggle b/w the fields of each record. Continue adding the record until you complete entering desired records. After it, close & finish record entry.

| Employee   |                   |                                               |          |           |  |
|------------|-------------------|-----------------------------------------------|----------|-----------|--|
| EmployeeID | EmployeeName      | Address                                       | Postcode | DateHired |  |
| 1          | Asim Husain Khan  | H.No. 7/14 Naseerabad Gulshan-e-Iqbal Karachi | 75950    | 3/16/2019 |  |
| 2          | Ashar Saeed Aalam | Flat No. A2 F.C. Area Karachi                 | 75960    | 3/16/2019 |  |
| 3          | Ali Akber         | House No. 1 New Karachi                       | 75950    | 3/16/2019 |  |
| 4          | Faisal Raheem     | Banglow No.D-47 Gulshan-e-Iqbal Karachi       | 75000    | 3/16/2019 |  |
| 5          | Yaseen Ghori      | Banglow No. C-101 Defence Karachi             | 70000    | 3/16/2019 |  |

## Queries Design

15-With the help of mouse click “Create”, then point and left click “Query Design”.

17- “Show table” panel will be open, select ” Table” tab from “Table/Query/Both”. Point and double left click the desired tables from available list of tables, to add these tables then left click “cross/close” present on top-right hand side of the panel, to close it.

18- Select field name from the available list of “combo-box”, which you want to display or manipulate. Table name of that particular field will automatically be added after your selection of field. Mention the criteria if you want. Uncheck the “CheckBox” if you don’t want to display this field.

19- Do repeat above step number 19 for each and every field, you want more to display or manipulate until you complete all desired field entries

20- Now in the “criteria” cell of field “EmployeeID” enter the contents “[Enter EmployeeID?]” to create the query of “Display Particular Record by Employee ID” and then Left click the “Cross/Close” button to close the Query Panel, left click “Yes” Button to save the Query1 with the new name “Employees By ID”, again left click “Ok” Button. You can save query with your desired name as well.

|           |                                     |                                     |                                     |                                     |                                     |
|-----------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| Field:    | [EmployeeID]                        | [EmployeeName]                      | [Address]                           | [Postcode]                          | [DateHired]                         |
| Table:    | Employee                            | Employee                            | Employee                            | Employee                            | Employee                            |
| Sort:     |                                     |                                     |                                     |                                     |                                     |
| Show:     | <input checked="" type="checkbox"/> |
| Criteria: | [Enter Employee ID?]                |                                     |                                     |                                     |                                     |
| or:       |                                     |                                     |                                     |                                     |                                     |

21- Now in the “criteria” cell of field “Address” enter the contents “Like \* Gulshan-e-Iqbal Karachi” to create the query of “Records having same address” and then Left click the “Cross/Close” button to close the Query Panel, left click “Yes” Button to save the Query1 with the new name “Employees By Address”, again left click “Ok” Button. You can save query with your desired name as well.

| Field:           | EmployeeID                          | EmployeeName                        | Address                             | Postcode                            | DateHired                           |
|------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| Table:           | Employee                            | Employee                            | Employee                            | Employee                            | Employee                            |
| Sort:            |                                     |                                     |                                     |                                     |                                     |
| Show:            | <input checked="" type="checkbox"/> |
| Criteria:<br>or: |                                     |                                     | Like '* Gulshan-e-Iqbal Karachi'    |                                     |                                     |

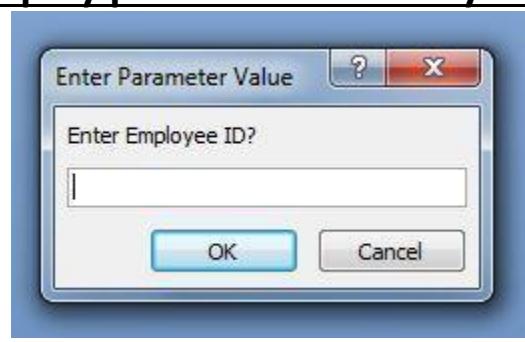
22- Repeat from above step number 17 to 21 for creating remaining queries, just remove the contents of criteria cell, as per your requirement.

## Obtaining Query Results

22-Double click any query to display its result, if there is a need of passing any value then just type-in the value you want to pass into the panel that appears before you.

## Output

### Requirement#3. Display particular record by EmployeeId



| Employee By ID |              |                                   |          |           |  |
|----------------|--------------|-----------------------------------|----------|-----------|--|
| EmployeeID     | EmployeeName | Address                           | Postcode | DateHired |  |
| 5              | Yaseen Ghori | Banglow No. C-101 Defence Karachi | 70000    | 3/16/2019 |  |

### Requirement#4- Display All records having the same Address

| Employee By Address |                               |                                               |          |           |  |
|---------------------|-------------------------------|-----------------------------------------------|----------|-----------|--|
| EmployeeID          | EmployeeName                  | Address                                       | Postcode | DateHired |  |
| 1                   | Asim Husain Khan              | H.No. 7/14 Naseerabad Gulshan-e-Iqbal Karachi | 75950    | 3/16/2019 |  |
| 4                   | Faisal Raheem                 | Banglow No.D-47 Gulshan-e-Iqbal Karachi       | 75000    | 3/16/2019 |  |
| *                   | (New) Mohsin Ahmed Khan Ghori | House No. 1 New Karachi                       | 75950    | 3/16/2019 |  |

### Practical No.7

**Object** Write a procedure to create a two tables having the following fields

**Table1:AccountNo, AccountName, HolderAddress, Contact, Email.**

**Table2:AccountNo, AccountStatus.**

#### Queries

1. Input 5 records
2. Search the desired AccountNo
3. Delete the desired AccountNo
4. Update desired AccountId.

### Procedure

#### Switching on Computer

1- Switch on your computer. Wait till the operation system “Windows” let you give access to interact with the computer.

#### Searching and Opening MS-Access

2-With the help of mouse click “Start” Icon, generally present at bottom left side of the computer screen-

3-Use Mouse click “Search Bar”, type “Microsoft Office Access” in it with the help of computer keyboard to search and open **MS-Access**.

#### Creating Database

4-Point Mouse Cursor to Blank Database, it will be highlighted then click it with mouse.

5- New panel at right hand side will be open, point your mouse cursor to the file name location, type new name “**BankAccountDatabase**” there then click “Create” button.

## Creating & Renaming Tables

6-Another big new panel at right hand side will be open, point your mouse cursor to “Table1: Table” icon, it will be highlighted then right click it, with the mouse. A “drop-down menu” will be open, click second option “Design View” from it.

7- Now “Save As” panel will be open, give new name “BankAccount” in the text box to Save “Table1” as “BankAccount”, then press “ok” Button.

8-Type in the “Field Name” text value “AccountNo”.

9- Use mouse to point the cell below “Data Type”, select there “Auto Number” from the available “combo box” option list.

10- Use mouse to point the next cell present under “Description” heading, type the description whatever you want to write for your future reference or let it remain empty.

11- Repeat above steps till all the remaining fields (**AccountName**, **HolderAddress**, **Contact**, **Email**) with “data types” and “description” are properly typed into the corresponding cell of Database Design Window. Always use “Text” data type for fields like [Name, Address, Contact, Email etc.], “AutoNumber” for automatic assignment of numbers. “Numeric” for fields on which calculation are performed, “Currency” for fields like [wages, salary], “Date” for fields which are supposed to store dates, “Hyperlink” for fields holding [websites / urls etc.], “OLE Object” for picture, photographs, “Yes/No” for status showing field, “Attachment” for external files, “Memo” for descriptive fields. “Lookup Wizard” for foreign fields from other tables of the database.

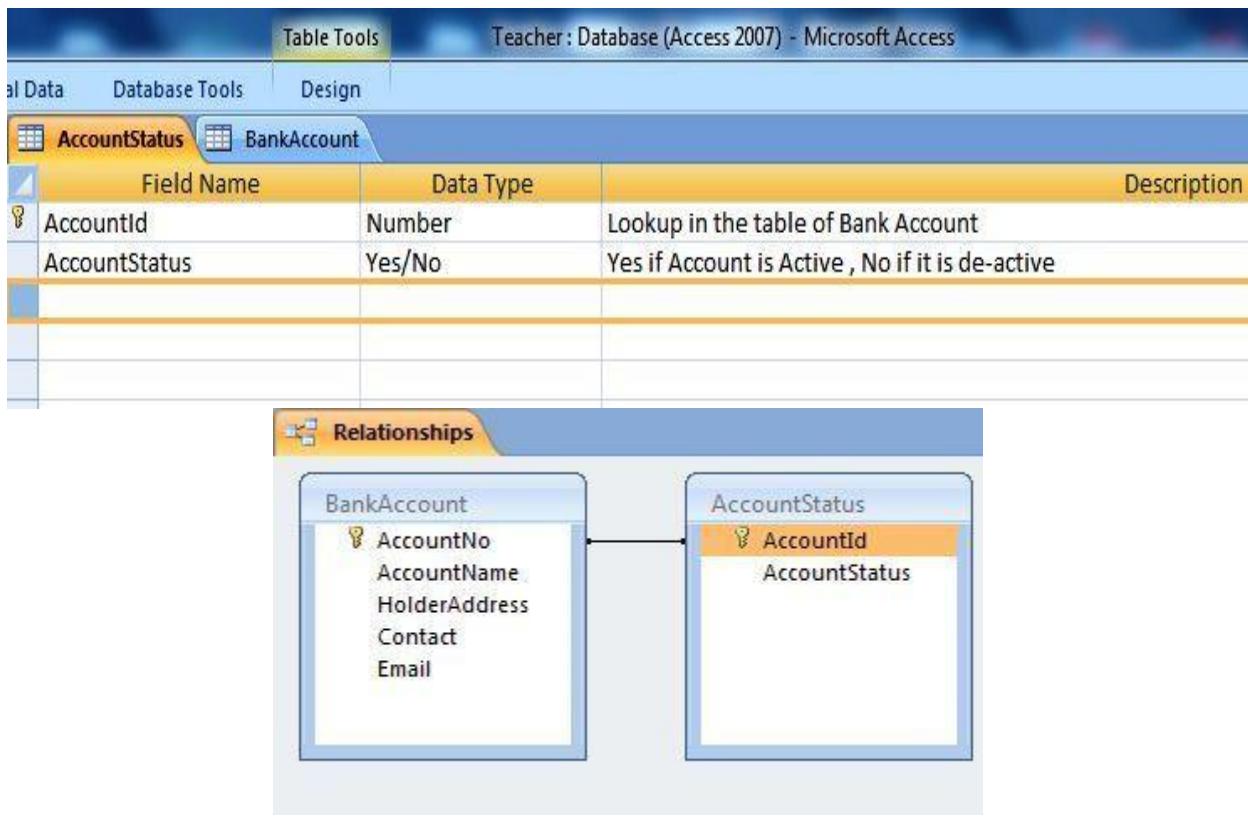
12- Repeat steps 6 to 11 for “AccountStatus” Table having fields (AccountNo as Foreign Key from BankAccount Table, AccountStatus)

13-

**Assigning Primary Key** to the suitable field i.e “AccountNo” in “BankAccount” table as well as in “Account Status” table which can be capable of identifying each record uniquely.

14-Save the Tables once again to update changes.

|   | Field Name    | Data Type  | Description                            |
|---|---------------|------------|----------------------------------------|
| ! | AccountNo     | AutoNumber | Account Number                         |
|   | AccountName   | Text       | Title of Account                       |
|   | HolderAddress | Text       | Address of Account Holder              |
|   | Contact       | Text       | phone, mobile number of account holder |
|   | Email         | Text       | Email Address of account holder        |



## Requirement#1- Entering Five(5) Records

15-Now double click “BankAccount” and “Account Status” tables repectively, to open it. Enter valid data into it. Use mouse to toggle b/w the fields of each record. Continue adding the record until you complete entering desired records. After it, close & finish record entry.

The screenshot shows the 'BankAccount' table open in Microsoft Access. It contains five records:

| AccountNo | AccountName                   | HolderAddress                  | Contact       | Email                |
|-----------|-------------------------------|--------------------------------|---------------|----------------------|
| 1         | Mohsin Ahmed Khan Ghori       | Hno1. Azizabad                 | 03009090901   | MakGhori5x@gmail.com |
| 2         | Sana ULLAH                    | Flat No. 232 Bufferzone        | 03332020201   | SanaULLAH@yahoo.com  |
| 3         | Danish Aziz                   | Banglow No. 67 North Nazimabad | 03313313310   | Danish@msn.com       |
| 4         | Kamran Khalil                 | B-41 Orangi Town               | 03212121210   | Kamran@hotmail.com   |
| 5         | Ahsan Shiekh                  | C-33 Nazimabad                 | 03455050501   | Ahsan@outlook.com    |
| *         | (New) Mohsin Ahmed Khan Ghori | Banglow No.1 Clifton Karachi   | +923002535970 | MakGhori5x@gmail.com |

The screenshot shows two tables in Microsoft Access:

- AccountStatus** table (top):
 

| AccountId               | AccountStat                         | Add New Field |
|-------------------------|-------------------------------------|---------------|
| Mohsin Ahmed Khan Ghori | <input type="checkbox"/>            |               |
| Sana ULLAH              | <input checked="" type="checkbox"/> |               |
| Danish Aziz             | <input checked="" type="checkbox"/> |               |
| Kamran Khalil           | <input checked="" type="checkbox"/> |               |
| Ahsan Shiekh            | <input checked="" type="checkbox"/> |               |
| *                       | <input type="checkbox"/>            |               |
- BankAccount** table (bottom):
 

| AccountNo | AccountName                   | HoderAddress                   | Contact       | Email                | Add New Field |
|-----------|-------------------------------|--------------------------------|---------------|----------------------|---------------|
| 1         | Mohsin Ahmed Khan Ghori       | Hno1. Azizabad                 | 03009090901   | MakGhori5x@gmail.com |               |
| *         | Sana ULLAH                    | Flat No. 232 Bufferzone        | 03332020201   | SanaULLAH@yahoo.com  |               |
| *         | Danish Aziz                   | Banglow No. 67 North Nazimabad | 03313313310   | Danish@msn.com       |               |
| *         | Kamran Khalil                 | B-41 Orangi Town               | 03212121210   | Kamran@hotmail.com   |               |
| *         | Ahsan Shiekh                  | C-33 Nazimabad                 | 03455050501   | Ahsan@outlook.com    |               |
| *         | (New) Mohsin Ahmed Khan Ghori | Banglow No.1 Clifton Karachi   | +923002535970 | MakGhori5x@gmail.com |               |

## Queries Design

16-With the help of mouse click “Create”, then point and left click “Query Design”.

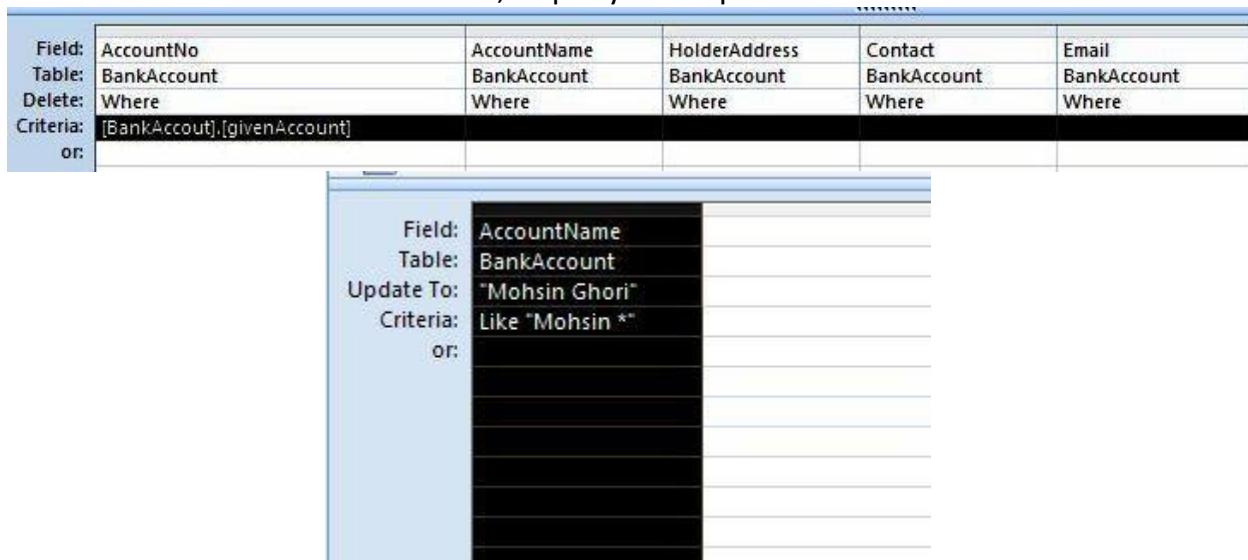
17- “Show table” panel will be open, select ” Table” tab from “Table/Query/Both”. Point and double left click the desired tables from available list of tables, to add these tables then left click “cross/close” present on top-right hand side of the panel, to close it.

18- Select field name from the available list of “combo-box”, which you want to display or manipulate. Table name of that particular field will automatically be added after your selection of field. Mention the criteria if you want. Uncheck the “CheckBox” if you don’t want to display this field.

19- Do repeat above step number 19 for each and every field, you want more to display or manipulate until you complete all desired field entries

20- Now in the “criteria” cell of field “**AccountNo**”, table “**BankAccount**” enter the contents “[BankAccount].[givenAccount]” to create the query of “all records having same department” and then Left click the “**Cross/Close**” button to close the Query Panel, left click “**Yes**” Button to save the Query1 with the new name “**BankRecord Display By Id**”, again left click “**Ok**” Button. You can save query with your desired name as well.

21- Repeat from above step number 17 to 21 for creating remaining queries, just remove the contents of criteria cell, as per your requirement.



## Obtaining Query Results

22-Double click any query to display its result, if there is a need of passing any value then just type-in the value you want to pass into the panel that appears before you.

## Output

### Requirement#2-Search Account by ID

The screenshot shows a Microsoft Access application window. At the top, there is a title bar with the text "BankAccount Display by ID". Below the title bar is a toolbar with several icons. The main area contains a table with the following columns: AccountNo, AccountName, HolderAddress, Contact, and Email. There are two rows of data:

| AccountNo | AccountName                   | HolderAddress                  | Contact       | Email                |
|-----------|-------------------------------|--------------------------------|---------------|----------------------|
| 3         | Danish Aziz                   | Banglow No. 67 North Nazimabad | 03313313310   | Danish@msn.com       |
| *         | (New) Mohsin Ahmed Khan Ghori | Banglow No.1 Clifton Karachi   | +923002535970 | MakGhori5x@gmail.com |

Overlaid on the table is a "Enter Parameter Value" dialog box with the following text and controls:

Enter Account ID for Search? \*

OK Cancel

### Requirement#3- Delete Account by ID

The screenshot shows a Microsoft Access application window titled "BankAccount". The main area displays a table with the following columns: AccountNo, AccountName, HolderAddress, Contact, and Email. There are six rows of data, including one new entry marked with an asterisk (\*):

| AccountNo | AccountName                   | HolderAddress                  | Contact       | Email                |
|-----------|-------------------------------|--------------------------------|---------------|----------------------|
| 1         | Mohsin Ahmed Khan Ghori       | Hno1. Azizabad                 | 03009090901   | MakGhori5x@gmail.com |
| 2         | Sana ULLAH                    | Flat No. 232 Bufferzone        | 03332020201   | SanaULLAH@yahoo.com  |
| 3         | Danish Aziz                   | Banglow No. 67 North Nazimabad | 03313313310   | Danish@msn.com       |
| 4         | Kamran Khalil                 | B-41 Orangi Town               | 03212121210   | Kamran@hotmail.com   |
| 5         | Ahsan Shiekh                  | C-33 Nazimabad                 | 03455050501   | Ahsan@outlook.com    |
| *         | (New) Mohsin Ahmed Khan Ghori | Banglow No.1 Clifton Karachi   | +923002535970 | MakGhori5x@gmail.com |

The screenshot shows a Microsoft Access application window with a warning message about running a delete query. The message reads:

You are about to run a delete query that will modify data in your table.

Are you sure you want to run this type of action query?  
For information on how to prevent this message from displaying every time you run an action query, click Help.

Buttons: Yes, No, Help

Below the message is a "Enter Parameter Value" dialog box with the following text and controls:

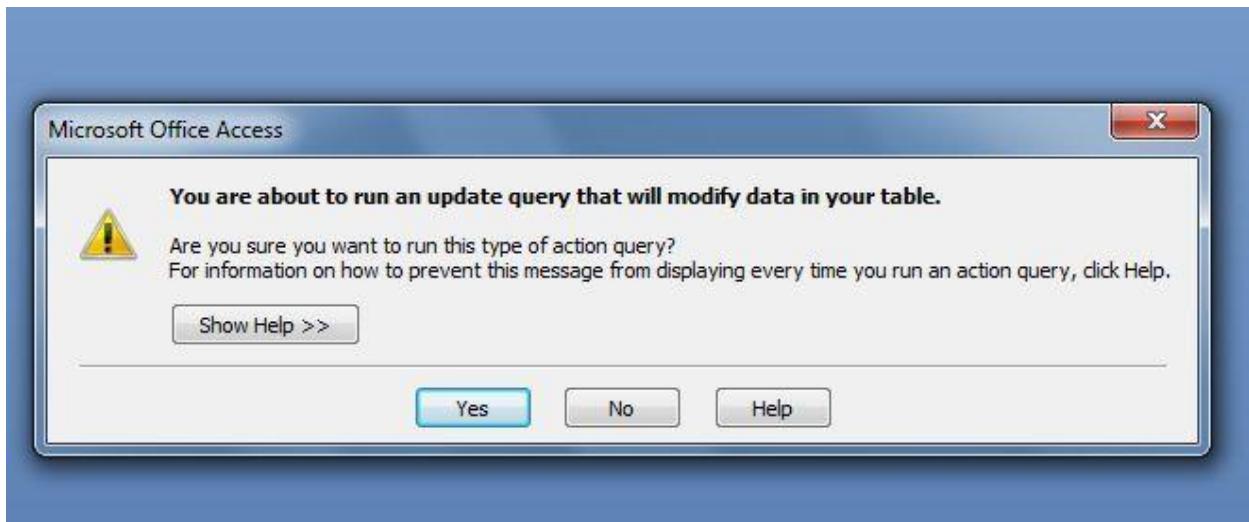
BankAccout.givenAccount

OK Cancel



| BankAccount |           |                         |                                |               |                      |
|-------------|-----------|-------------------------|--------------------------------|---------------|----------------------|
|             | AccountNo | AccountName             | HoderAddress                   | Contact       | Email                |
| [+]         | 1         | Mohsin Ahmed Khan Ghori | Hno1. Azizabad                 | 03009090901   | MakGhori5x@Gmail.com |
| [+]         | 2         | Sana ULLAH              | Flat No. 232 Bufferzone        | 03332020201   | SanaULLAH@yahoo.com  |
| [+]         | 3         | Danish Aziz             | Banglow No. 67 North Nazimabad | 03313313310   | Danish@msn.com       |
| [+]         | 6         | Kamran Khalil           | B-41 Orangi Town               | +923002535970 | Kamran@hotmail.com   |

## Requirement#4- Update Account by ID





| BankAccount |           |                         |                                |               |                      |
|-------------|-----------|-------------------------|--------------------------------|---------------|----------------------|
|             | AccountNo | AccountName             | HolderAddress                  | Contact       | Email                |
|             | 1         | Mohsin Ghori            | Hno1. Azizabad                 | 03009090901   | MakGhori5x@gmail.com |
|             | 2         | Sana ULLAH              | Flat No. 232 Bufferzone        | 03332020201   | SanaULLAH@yahoo.com  |
|             | 3         | Danish Aziz             | Banglow No. 67 North Nazimabad | 03313313310   | Danish@msn.com       |
|             | 4         | Kamran Khalil           | B-41 Orangi Town               | 03212121210   | Kamran@hotmail.com   |
| *           | (New)     | Mohsin Ahmed Khan Ghori | Banglow No.1 Clifton Karachi   | +923002535970 | MakGhori5x@gmail.com |